PROCEEDINGS

OF THE

DEEP WATERWAYS CONVENTION

HELD AT

TORONTO, SEPTEMBER 17-20, 1894.

Published by Order of the City Council of Toronto.

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J. Y. Reid, City Printer, 73 to 81 Adelaide Street West.
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SUMMONING THE CONVENTION.

On 17th July, 1894, the following resolution was adopted by the City Council as follows :

Moved by Ald. Thompson, seconded by Ald. Sheppard—

That whereas it is of the utmost importance to Toronto and the whole of the North-west that the canals be deepened to admit of sea-going vessels coming to Toronto, and that the grain of the North-west be carried from the Upper Lakes to tide water without breaking bulk ; be it resolved, that a convention be invited to meet in Toronto during the last week of August next, to discuss the whole question of canal enlargements, and that the following be a Committee of this Council, viz. : Ald. Shaw, Lamb, Sheppard, Hewitt, Graham, Hallam, Dunn and the mover, to make the necessary arrangements and issue the invitations, and that the use of the Pavilion in the Horticultural Gardens be reserved during said week for the use of the Convention.

A number of citizens were subsequently added to the Committee, and the date for holding the Convention was changed to September 17th. The following circular invitation was issued :

CITY HALL,
Toronto, 4th August, 1894.

COMMITTEE ON DEEP WATERWAYS.

His Worship the Mayor.
Ald. J. Enoch Thompson, Chairman.
" John Shaw, Chairman Executive Committee.
" Daniel Lamb, Chairman Board of Works.
" John Hallam, Chairman Parks and Gardens Committee.
" Ed. Hewitt, Chairman Court of Revision.
" O. B. Sheppard, Ald. J. J. Graham, Ald. John Dunn.

For years throughout the West the question of improved water communication with the East has been agitated.

Conventions to further this object have been held at Grand Forks, Detroit, Washington and St. Paul.

A 20-ft. channel to the sea would reduce the freight and increase the price of the products of the soil throughout the whole of the West and the North-West.

The States of North and South Dakota, Minnesota, Wisconsin, Michigan, Illinois, Indiana, Ohio, the North-West Provinces of Canada and Ontario, parts of Kansas, Nebraska and Colorado, are largely interested in this question.

Twenty-six millions of people live in the eight States that border on the Great Lakes, and six millions in adjacent territory depending on them. It is of immense importance to these people to have a 20-ft. channel clear to the Atlantic.

The enhanced value of one year's crop would pay the total cost. In a speech delivered in the Canadian House of Commons, 30th April, 1894, by Mr. Cockburn, of Toronto, in favor of deepening the canals, that gentleman estimated that deep waterways would add $120 to the value of a crop from a 160-acre farm. This is only allowing five cents per bushel, and is well within the mark.

With a 20-ft. channel, ocean vessels will be seen in the harbors of Toronto, Detroit, Buffalo, Cleveland, Chicago, Duluth, etc., bringing cheap coal, and taking away the products of forest and field, and the magnificent fleet of steamers now land-locked in the Upper Lakes will have access to the ports of the world.

This is not a local or sectional question; the people of the Western States and Canadian Provinces are equally interested. The Great Lakes and St. Lawrence are free without restriction, and the resources of our civilization will doubtless find some means of making the connecting links on an equitable basis.

On 30th April last, a resolution was introduced in the Canadian Parliament on this subject, showing the lively interest taken in deepening the canals by some of our leading statesmen.

Without formulating any particular policy, a Convention will be held at Toronto, September 17th to 20th, 1894, to discuss this great question and the best means of securing these objects.

It is desired that all business interests, irrespective of nationality or politics, be repreeented.

The Board of is hereby invited to send delegates to said Convention, authorized to speak for them.

A prompt reply will oblige, stating whether your Board approves of the objects of the Convention, and how many delegates you wish to send. A programme of the proposed proceedings will be forwarded later. The Toronto hotels will grant special rates, and it is expected that the railways will make similar concessions.

J. ENOCH THOMPSON,
Chairman of Committee.

The following is a list of acceptances and delegations :

ONTARIO.

Hon. N. C. Wallace, M.P., Controller of Customs.

Kivas Tully, C.E., Ontario Government Engineer.

Lieut. Blow, U.S.N., representing the Government of the United States.

Toronto City Council, represented by Warring Kennedy, Mayor; Aldermen J. Enoch Thompson, John Shaw, Daniel Lamb, John Hallam, Ed. Hewitt, O. B. Sheppard, J. J. Graham, John Dunn; E. H. Keating, City Engineer.

Toronto Board of Trade, represented by Hugh Blain, President; J. H. Mason.

Members for the City in the Dominion Parliament—G. R. R. Cockburn, M.P.; Lieut.-Col. Denison, M.P.; E. Coatsworth, M.P.

Members for the City in the Provincial Legislature—G. F. Marter, M.P.P.; G. S. Ryerson, M.D., M.P.P.; O. A. Howland, M.P.P.; Ald. Crawford, M.P.P.

Dominion Millers' Association—Robt. Noble.

Halton County Patrons of Industry—H. W. Cook.

General Laborers' Union—John Dunlop.

Ontario Mining Institute—Prof. A. P. Coleman, Judge J. J. Kingsmill, Archibald Blue, J. M. Clark, T. W. Gibson.

Toronto Citizens' Committee—John Brown, R. C. Steele, J. H. Boyle, Wm. Bell, P. G. Close, Peter McIntyre.

Thorold Town Council—Jas. Battle, William Williams, W. McCleary.

Thorold Board of Trade—T. E. Simson, L. McMann.

Port Arthur Board of Trade—W. C. Dobie, President; H. A. McKibbon, Claron Squier.

Port Arthur City Council—J. L. Meikle, W. C. Dobie.

St. Catharines City Council—D. Robertson, Mayor.

Fort William City Council—Jas. Conmee, M.P.P.

Trenton Board of Trade—G. W. Ostram, President; A. Urquhart.

Hamilton City Council—Ald. Colquhoun.

Toronto Ratepayers' Association—Dr. E. J. Barrick, President.

East Grey Agricultural Association—Dr. Sproule, M.P.; Geo. Stewart, R. J. Sproule.

Canadian Institute—Alan McDougall, C.E.

Waterloo County Council—Geo. A. Clare, Warden.

Agricultural and Arts Association—N. Awrey, M.P.P.; Henry Wade.

Citizens' Deep-Water Committee, Toronto—Thos. McCracken, Geo. Faulkner, W. I. McKenzie, E. E. Sheppard.

Collingwood Board of Trade—A. J. Telfer, J. J. Long, B. Callary.

Guelph Board of Trade—Jas. Goldie, J. E. McElderry.

London City Council—E. O. Essery, Mayor; Ald. Pritchard.

Stayner Town Council—W. B. Saunders, Mayor.

Goderich Town Council—The Mayor, the Reeve, the Deputy Reeve, Councillor Saunders.

Oakville Town Council—The Mayor, the Reeve.

Patrons of Industry—A. Gifford, President.

Collingwood Town Council—Jno. Nettleton, Reeve; H. Y. Telfer.

Invitations were also extended to and accepted by:

Frank Moberly, C.E., Collingwood; David Blain, ex-M.P., West York; Alex. McKay, M.P., Hamilton; C. C. James, Toronto; Hon. Jno. Ferguson, Senator, Toronto; Prof. Goldwin Smith, Toronto; Robt. Winton, Beeton; W. E. Redway, Toronto; Wm. Mulock, M.P., North York; T. D. Ledyard, Barlow Cumberland, Toronto; G. R. Pattullo, Woodstock.

MANITOBA.

Brandon City Council—J. C. Sinclair.

Winnipeg Board of Trade—W. B. Scarth, President.

Winnipeg Grain and Produce Exchange—S. A. McGaw, President.

Winnipeg City Council—J. W. Taylor, Mayor.

W. C. Graham, Portage la Prairie.

Hon. S. C. Biggs, Winnipeg.

QUEBEC.

Richard R. Dobell, Quebec.

Alex. McFee, Montreal.

J. P. Cleghorn, Montreal.

Henry Bulmer, Montreal.

John Kennedy, C.E., Montreal.

PENNSYLVANIA.

National Board of Steam Navigation, Pittsburg—Capt. L. R. Keck.

NEW YORK.

C. H. Cady, Port Henry, N.Y.

OHIO.

Cleveland Chamber of Commerce—H. D. Goulder, L. E. Holden, C. E. Wheeler.

Toledo Produce Exchange—Denison B. Smith.

Cleveland City Council—H. D. Goulder, Capt. C. E. Benham, C. E. Wheeler.

Cincinnati City Council—L. R. Keck.

Ashtabula City Council—W. S. McKinnon, L. E. W. Jarvis, J. M. Townsend.

MICHIGAN.

Sault Ste. Marie Chamber of Commerce—Hon. H. W. Seymour.

Detroit Board of Trade—Hon. W. C. Maybury, Hon. W. Livingstone, jr., Jesse H. Farewell.

ILLINOIS.

Chicago Board of Trade—L. E. Cooley, C.E.; Capt. J. S. Dunham, Thos. F. Judge.

IOWA.

Davenport Business Men's Association—A. P. McGuirk.

MINNESOTA.

State of Minnesota—E. V. Smalley, St. Paul; Col. J. H. Davidson, St. Paul; Albert Scheffer, St. Paul; W. H. Eustis, Mayor of Minneapolis; S. A. Thompson, Duluth.

St. Paul Chamber of Commerce—E. V. Smalley, Jas. Suydam.

Minneapolis Board of Trade—A. L. Crocker, President; H. B. Hudson.

Commercial Clubs of St. Paul and Minneapolis—Col. J. H. Davidson.

WISCONSIN.

W. Superior City Council—Judge F. Winsor, E. C. Kennedy, ex-Mayor; R. J Wemyss, F. B. Clarke, Ald. J. H. Agen, Alex. McDougall, Kirby Thomas, Frank A. Flower, Capt. C. S. Barker.

WASHINGTON, D.C.

Hon. Thos. J. Henderson.

MONDAY, SEPTEMBER 17TH—AFTERNOON SESSION.

The Convention met informally in the Council Chamber at 3 p.m., Monday, September 17th. The delegates presented their credentials and were introduced to Mayor Kennedy and Ald. J. E. Thompson, Chairman of the Joint City Council and Citizens' Committee on Deep Waterways.

The following Committee, designated the Committee on Permanent Organization, was appointed by the Convention :

James Suydam, St. Paul (Chairman).
L. R. Keck, Cincinnati.
A. P. McGuirk, Davenport, Iowa.
L. E. Cooley, Chicago.
Ald. Thompson, Toronto.
O. A. Howland, M.P.P., Toronto.
James Conmee, M.P.P., Port Arthur.
D. E. Smith, Toledo.
John Brown, Toronto.
Col. Davidson, Minneapolis.
R. R. Dobell, Quebec.

The Convention then adjourned.

MONDAY, SEPTEMBER 17TH—EVENING SESSION.

The Convention assembled at 8 p.m., Ald. J. E. Thompson in the chair.

The Committee on Permanent Organization submitted their report. The report, which was adopted, recommended the appointment of the following Officers and Committees :

Officers of the Convention.

Chairman—J. Enoch Thompson, Toronto.
1st Vice-Chairman—E. V. Smalley, Minnesota.
2nd Vice-Chairman—R. R. Dobell, Quebec.
Secretaries—J. H. Boyle, Toronto ; Denison B. Smith, Toledo.

Committee on Order of Business.

James Suydam, St. Paul.
R. C. Steele, Toronto.
Ald. Graham, Toronto.
Ald. Dunn, Toronto.
Capt. J. S. Dunham, Chicago.
Chas. E. Wheeler, Cleveland.

COMMITTEE ON RESOLUTIONS.

James Suydam (Chairman).
Frank A. Flower (Secretary).
A. P. McGuirk.
Lieut. Geo. P. Blow, U.S.N. (Honorary).
J. H. Davidson.
R. R. Dobell.
T. W. Taylor.
James Conmee, M.P.P.
O. A. Howland, M.P.P.
L. E. Cooley, C.E.
J. S. Dunham.
J. Brown.
Ald. Hewitt.
L. R. Keck.
H. W. Seymour.
A. L. Crocker.

COMMITTEE ON PERMANENT ORGANIZATION.

A. P. McGuirk (Chairman).
Frank A. Flower (Secretary).
James Suydam.
R. R. Dobell.
H. W. Seymour.
J. Brown.
A. L. Crocker.
T. W. Taylor.
L. R. Keck.
O. A. Howland, M.P.P.
James Conmee, M.P.P.
L. E. Cooley, C.E.
H. P. Goulder.
J. H. Davidson.
J. S. Dunham.

Ald. Thompson—I thank you very much, gentlemen, for appointing me Chairman of this Convention. I should have preferred to see some distinguished American occupy that position, but the gentlemen from the United States on the Committee insisted otherwise. I shall now call on the Secretary to read the circular calling the Convention.

Mr. Boyle read the circular, which appears on a previous page.

Mr. Thompson continued: We have welcomed many conventions to this City, but none of greater importance than the one now assembled here. We recognize that the interests of Toronto would be satisfied if the canals were deepened on the St. Lawrence River only, but we take a wider view than this, and recognize the fact that the prosperity of the whole country is our prosperity. We feel that the farmers of the North-west have been hampered by the high cost of transportation and by the competition of cheap labor in other lands. The competition we cannot help, but the cost of transportation it will be our business at this Convention to devise a method for reducing. The farmers of the prairies of the North-West, the ranchers, the miners, the artisans, are all deeply interested in the cheap transportation of the products of the West. For that reason we thought well to call this Convention in Toronto. The cost of exporting a bushel of wheat from Dakota to Liverpool will transport 2½ bushels from the Argentine to Liverpool. The only salvation for the Western farmer is the cheapening of transportation. This Convention has been called to consider the question of deepening the canals; but that is only a means to the end. If there are other means, by building other canals, or ship railways, I think they come properly within the scope of this Convention, and I would suggest that any schemes tending to the reduction of the rate of freight should be heard at this Convention. There are many schemes before the

public more or less favorably spoken of; but there are eminent engineers at this Convention; there are business men here, and they may be relied upon to promptly expose any utopian or foolish schemes as quickly as they would endorse any that are good and reasonable. This is a convention of business men. We have among us representatives of our Parliament and representatives of the American Congress, and the United States Government has sent a representative from the Department that deals with the Lakes. We have, therefore, a Convention that is able to speak intelligently on every question that will come up here for discussion. I have much pleasure in asking His Worship Mayor Kennedy to deliver His Address of Welcome.

ADDRESS OF WELCOME.

His Worship Mayor Kennedy.—Mr. Chairman and gentlemen composing this Convention: I am conscious of the honor conferred upon me in being requested to tender this large gathering a welcome to the City of Toronto. In my capacity of Mayor I have been called upon on several occasions formally to tender addresses of welcome to conventions visiting our City, but I regard none that I have had the honor of addressing—viewing it from a physical standpoint—so important as the convention now assembled in this City Hall. (Applause.)

A very large convention assembled in the City some weeks ago, which was important indeed, and we could scarcely judge which was the more important. I refer to the great convention which had for its object the moral well-being of the community, the Young People's Baptist Church Convention, which was some six thousand strong. Their object was of a moral nature, yours is of a physical and material nature. They had one special object in view, and you have another; but still both have in view the welfare of humanity, the promotion of trade and commerce, and the elevation of our race, the doing good to our fellow men. The importance of this Convention cannot be over-estimated.

I gladly respond to the call of the Committee of Management to address a few words of welcome. The subject that will be considered by you is very tempting indeed, but, Sir, I will tread very lightly on the domain you are about to traverse, and anything I may say must not be regarded as stepping-stones on the highway, or rather the waterways, you are about to investigate. (Applause.)

Mr. Chairman, I congratulate you on the success of this Convention. I congratulate you, your associate Aldermen and the members of the Board of Trade, on the success you have achieved. I know the great labors you have gone through, the anxiety and toil you have had, the vast amount of correspondence and all those necessary details. You have passed through them all and you have done your duty cheerfully.

Our Great Creator has given us a noble heritage. Nature has dealt very bountifully with us, giving us noble streams and lakes. These vast waters are at our command, and Nature invites us to supplement the work she has done, so that we may control these extensive sheets of water and utilize them for the benefit of mankind in facilitating the transportation of the products of the West to the Atlantic seaboard, in order that the millions on the eastern shores may share in

the products of the fertile fields of the West, by having them transported at a very low cost.

The Anglo-Saxon race has been entrusted with the destinies of this North American Continent. The wonderful energy displayed by that race is to be seen all round us, both in the United States and Canada. This Anglo-Saxon race is destined to control the world. To-day 120 millions of people speak the English tongue. To us, then, is committed this great trust, and I believe we shall prove ourselves equal to the emergency. I believe a sound from this Convention will ring out in a way that cannot be mistaken, and the interest of the people of the Dominion and the United States will be aroused to the importance of the great subject that will be debated at this Convention.

It is clearly demonstrated that a Convention of this kind is necessary if we consider the demands that have been made in the West and North-West for cheaper transportation. Farming operations in the North-west cannot be profitably carried on if transportation to the seaboard is wholly or partially limited to the railways. The future price of wheat must inevitably rule low, except under conditions that are abnormal, such as the failure of crops or the existence of war. It is considered by experts that the price of wheat will rule low for all time to come. We in America have to contend with the products of Australia, Russia, India. The farmers of the Canadian and American North-West realize that economy in transportation lies at the very basis of their prosperity, and we know that the cost of transportation to-day is such that when it and other expenses incidental to farming are deducted from the receipts very little indeed is left to the farmer. The average cost of transportation by rail is six times the average cost of transportation on the Great Lakes. We believe that while it is physically impossible to transport the farms to the Ocean it is quite possible for us to bring the Ocean near the farms. (Applause.) If the mountain will not come to Mohammet, Mohammet must go to the mountain. Here is a little extract I have taken from one of the City papers showing the difference between rates by water and rail:

Freight from Brandon to Fort William, 560 miles, 12 cents.

The charge from Chicago to Buffalo by vessel, 900 miles, is from 2 to 3 cents. Rail freight is consequently six times greater than by water.

From Duluth to Buffalo by water, 1,000 miles, the freight rate is between 3 and 4 cents.

From Duluth to Montreal by water, 1,400 miles, 6 to 7 cents.

From Winnipeg to Montreal by rail, the distance being the same as from Duluth to Montreal, the charge by rail is 27 cents.

These figures show the cheapening of the cost of transportation that can be effected by the creation of a canal system that would practically transform the lakes into great oceans. We know the people of the North-West are pushing this question very strongly. The Americans are urging upon Congress that something must be done, that a great and final effort should be made to remedy the difficulties under which we labor.

We are all agreed something ought to be done, and were we all of one mind in regard to waterways that should be deepened it would doubtless be easily accomplished, but unfortunately there are general methods proposed and each one has its numerous ardent advocates. Several schemes have been brought before the attention of the public. There is the Ottawa Valley Canal, ascending the lakes by way of the French River, and the Hurontario Ship Canal. The latter has been before the people of Canada for 40 or 50 years, since the time it was first advocated by Mr. Capreol. This route possesses great advantages. I advocated this scheme myself years ago. It is intended vessels should come from Georgian Bay to Lake Ontario by this canal. You will observe that even this project, which is one I have always favored, involves the enlargement of the St. Lawrence Canal. I understand a company has subscribed the necessary stock to prosecute the work of the Georgian Bay Ship Canal. Then there is the Hurontario Ship Railway, designed to carry vessels of 5,000 tons overland, along the same route.

Furthermore, an air-line from Collingwood to Toronto has been suggested, but all these schemes involve the enlargement of the St. Lawrence canals and waterways. We may say what we will, but here is the natural course to the ocean. Nature invites us to use it. The obstructions that exist there can be removed, but at a great cost, of course. The national highway to the ocean is by the great St. Lawrence River. As you have stated, Mr. Chairman, we cannot deal with this as a merely local question. We must deal with it in its broad international aspect. (Applause.) Lengthy discussions have taken place in the House of Commons upon this question. Our Government has given us a 20-ft. waterway for 800 miles, but here we find we are stopped by a 14-ft. canal, so that vessels drawing 20 feet cannot proceed the whole way to the ocean. Transhipment is necessary. Some say you are asking too much when you ask the Government to stop working on their 14-ft. system and change it to 20 feet. Railway rates east of Chicago have become reduced to a minimum. Still, the rates are entirely too high, and New York can scarcely hope to continue to be the seaport of the West when prices of products become lower and lower, unless she can provide transportation on a much larger scale than the tow-path affords. Numerous conventions have already been held to agitate this question. I remember some twenty years ago, one was held at Des Moines; in 1891 one was held in Detroit, and in 1892 at Grand Forks. Again, there was a convention last year at St. Paul. The deep water outlet was considered by far the most important of all matters at these conventions, but no definite canal route has yet been decided upon. A resolution was submitted to the United States Congress in 1892 to authorize international negotiations on the subject. The resolution reads as follows:

Resolved, That the Senate and House of Representatives of the United States of America, in Congress assembled, that the President of the United States be and he is hereby requested to invite negotiations with the Government of the Dominion of Canada to secure the speedy improvement of the Welland and St. Lawrence Canals and St. Lawrence River, so as to make them conform in depth and navigability, so far as practicable, to the standard adopted by the Government of the United States for the improvements now in progress within the United States of the waters connecting the Great Lakes, and to that end the President is hereby authorized, if he deems expedient, to appoint three commissioners to negotiate, on behalf of the United States, with the representatives of the Government of the

Dominion of Canada, the terms and conditions of any agreement which may be entered into between the two Governments, in pursuance of any proposition submitted in that behalf by the Government of the Dominion of Canada.

It is somewhat encouraging to us in the Dominion to know that at least the Government of the United States sympathizes with this movement to make the waters of the St. Lawrence navigable for large vessels all the way to the sea. Our own Government has constructed the Welland and St. Lawrence canals, but these have proved too small for the necessities of the case. Then we have both Governments constructing each a large canal at Sault Ste Marie, each canal having only one lock. These magnificent canals admit vessels of heavy draft, but we want to carry out the same idea in regard to the whole system right to the sea. It may be said the Dominion Government is not able to accomplish this itself. Fifty-four millions have already been spent on canals, and a very large sum is yet required to accomplish what is aimed at. If the Dominion Government is not able to accomplish this, and if this Convention and the people of both countries were to unite in one demand that the canals should be improved, then if our Government feels it could not undertake the work, let it be admitted, and let the United States be asked to take part in this matter. Some say there can't be joint control. Still, there can be control by one of the powers. The Dominion Government can give the United States rights commensurate with the amount they spend on the work. I have no doubt the Governments of the United States and Canada will consider the resolutions that will be carried at this Convention.

I tender you a very hearty welcome on behalf of the City Council and the people of Toronto, and I trust your meeting will be of a pleasant character, and that what you do will benefit the people of the Dominion and of the whole Continent. (Applause.)

THANKS FROM THE UNITED STATES DELEGATES.

Mr. E. V. Smalley—I think I may take it upon myself, Mr. Chairman, to return, on behalf of the delegates from the United States, our very cordial appreciation and thanks for the warm welcome given us by your Mayor. I want to say a very few words in an off-hand way—first, to explain the position of the North-West delegates, and secondly, to look ahead to the action which will probably produce practical results. As your Mayor has informed you, we have had two international conventions on the subject of deep waterways. With them was combined the idea of reciprocity, which is very dear to us on both sides of the border in the North-West. (Applause.) You have perhaps done wisely in separating the two questions, and leave the future to bring them again into alliance. At these conventions, the first of which was held at Grand Forks, and the latter at St. Paul, we had large delegations from Manitoba. We had a few people only from Ontario. We had not among us any gentlemen from your Eastern Provinces who could enlighten us upon the question of the waterway which you desire at their end of the long line, and therefore in our resolutions we were not able to take any definite ground as to what should be done, or how it should be done, from the end of the Welland Canal to the sea. We had at those conventions a gentleman whom I expect to see here, who is particularly well informed on all

matters of water transportation. I refer to Mr. Thompson, of Duluth. Mr. Thompson will antagonize the idea of deepening the St. Lawrence canals, and he advocates with a good deal of ability the construction of a canal across the State of New York to the Hudson River, from Oswego. We in the North-West were not informed as to the relative merits of any of your projects. What we stood for was a 20-ft. channel to the sea. We looked outward to the ocean, and we didn't discuss where our 20-ft. channel should strike deep water. We are here now for enlightenment. We want to learn more as this Convention goes along, and we want to go home convinced in our minds that a certain definite line to the sea is the best line, and the most feasible and practicable and can be run at the earliest day. It is your task to enlighten us on this subject, and I can say to you, you will not find among our delegates from the North-West any national prejudice that would stand in the way of our joining you in what is unquestionably the best and quickest way to get to the sea, because none of us can fail to recognize the fact that these two great English-speaking peoples, that face each other along a line 4,000 miles in length, are being drawn by the circumstances of their own condition and by the force of civilization into nearer and nearer accord. (Applause.) Whatever it may be with the politicians, the people are fast seeing that it is for their interests to draw near together for the accomplishment of great objects which will benefit both countries. In saying for myself that I hope to see the Customs wall gradually grow lower and lower, I don't intend to commit this Convention to any declaration on this subject. I only want you to understand that we of the North-West, with substantially the same great agricultural interests, separated as we are from each other by an imaginary line, do believe that the time will come when our statesmen at Ottawa and Washington will enable us to exchange freely the products of our soil and mines. (Applause.)

In looking into your faces here, I cannot imagine myself in any foreign country. Hearing the friendly tones of your voices, I cannot imagine that I am not at home. I have attended conventions in nearly every State, and if brought into this room blindfolded, if I could not see the portrait of your Queen on the wall there, it would be hard for me to fix my location. In conclusion, gentlemen, let me say you will kindly treat us somewhat as pupils going to your school. Give us all the facts and information, and depend upon us after we have got home to mass our public sentiment in the West in favor of some measure that will give to our great cereal products a free and cheap outlet to the markets of the world. (Applause.)

Col. J. H. Davidson, St. Paul—In response to the Address of Welcome from the Mayor of Toronto and to the other indications of welcome that have been extended to us, let me say that we are glad to be with you. We are here for business, and the delegations for which I speak are largely composed of business men. I have been requested to represent at this Convention the Commercial Club of St. Paul and the Commercial Club of Minneapolis, the two largest and most influential business organizations in the twin cities. Our object is to secure such facilities for transporting the products of the West to the markets of the world as will leave a larger margin of profit in the hands of the producer. In looking at this problem, we do not know the one Government from the other. We are

speaking for a Continent and a race. We are here advocating something not for the puny generations that now partially cover this Continent, but we are speaking for the millions that are to come after us. (Applause.) It matters but little whether the farmers on the prairies shall get ½, 2 or 3 cents a bushel more for their products in their lifetime, but it does matter a great deal to the generations that shall come after us whether or not we have all these improved facilities; whether we have the opportunity of free exchange of that which we produce. Both countries will produce a vast surplus in the near future, which ought to reach the markets of the world by the cheapest route. Our progress has been so wonderful within the past few years that we have girdled the Continent with steel railways. There is a network of iron spun all over this vast expanse of territory on your side and ours, north and south, east and west, carrying vast loads of people, millions of tons of freight. We are witnessing a development which is truly marvellous. It is but a few years back since the country for which I speak was inhabited by the redman. About the falls of St. Anthony there was nothing heard but the cry of savage tribes. To-day, within a radius of ten miles up and down the Mississippi, there is gathered a population of at least half a million prosperous, happy people, with as elegant homes and fine schools as can be found in the same area anywhere else upon this Continent. We are constantly developing. What a few years ago were considered the most wonderful iron mines of the world have been distanced and left in the shade by those wonderful discoveries in the Mersabia range, north of Duluth, which supplied the raw material to the furnaces of Ohio, Michigan and Pennsylvania. So you have upon your side of the line wonderful natural resources—mines that are inexhaustible, a timber belt which cannot be consumed by coming generations for hundreds of years. We want an opportunity to subdue the wilderness; to open the waterways; to bring into closest connection the citizens of every part of this great Continent. We are all of the Anglo-Saxon race—a wonderful race, that holds the reigns of power on this Continent and Europe. It is the dominating power, and, thank God, it is a Christian power (hear, hear), dictating peace between warring nations, settling mighty disputes that a few short years ago would have involved the moving of vast armies. We are rapidly seeing that state of things pass by, and we can now arbitrate all the great questions that arise between civilized people. We may, I think, reasonably hope that war has now almost forever ceased among the most powerful nations of the globe. In our consultations together upon the subject matter of this Convention we are all novices. The matter has not been sufficiently discussed; the figures have not been carefully collected; the facts have not been so presented to the public that I can say my mind is settled, that you can say your mind is fixed upon some special plan of improvement. What we want is to push the Atlantic Ocean to the feet of Duluth—to bring it inland—so that the ships from Antwerp, Liverpool, Berlin and from all the cities upon the sea shall be able to enter these Great Lakes, trade with our people, buy our products, become better acquainted with us, and help to consummate what people desire to see—a brotherhood of man. The wonderful development we have seen on every hand, which we are witnessing day by day, is drawing into closer communion all the nations of the earth. We learn that we have the same sympathies, the same lives, the same emotions; and while you may love your good Queen, and while you may be attached to the stable government that

has done so much for the world, we may be equally attached to another form of government. We raise no question as to the best. We are each in our own way working out the problem of civil government, of government for the people and by the people. The interests of the Eastern States, of the extreme Southern States, may be against the St. Lawrence project, but the States of the North-West, of the Middle States, of almost the whole vast Continent, are dependent largely upon the cheapening of transportation to the ocean. Our plans must be broad, so that we will grasp not only the connection by way of the St. Lawrence, if that route shall be found the best, but a connection southward, from the Great Lakes to the Mississippi, and then we shall have a waterway from the mouth of the Mississippi through the centre of the Continent of North America.

As far as the experiment of deepening waterways is concerned, we are finding wonderful benefits from it in the West. Were it not for the great facilities afforded by the Great Lakes for the transportation of fuel to the port of Duluth, we could hardly keep warm in the North-West in winter. And were it not that the products of the North-West can be transported so cheaply to Buffalo, we would not receive anything like what we do for our products.

Gentlemen, we are on the right road. We may differ as to some of the plans, but if we look each other in the face, if we talk as man to man, each presenting his reasons, we will ultimately arrive at the best plan and at something that is feasible and possible. I am glad to know that in Congress a resolution has already been introduced looking to the appointment of Commissioners to confer with the Canadian Government as to this matter. I trust there will be reciprocity in that matter at least, and that when Parliament assembles there will be a Commission appointed to consider this great question. I don't see that the delegates at this Convention will have power to bind the constituencies behind them. When we get an understanding among ourselves we can go back to the clubs or cities we represent and make known what has been done at this Convention. We can say to them "this seems the most feasible thing," and I think prior to our adjournment we want to make provision that this question will be agitated by the people of every city of the United States where it is likely to be approved of, and in Canada too, wherever it will benefit your farmers or artizans. There is no question but we can act together in harmony. There are cranks on our side of the line and there may be some on the Canadian side, but they can easily be brushed aside.

Gentlemen, let me say in conclusion, we are here for work. We are ready to commence now, or to-morrow morning, and to sit till we have finished the job. (Applause.) We want to get it so thoroughly started that it will swell in power and volume like an avalanche that sweeps down the mountain and carries everything before it. If you start it in Ontario we will carry it into Michigan and Ohio and Minnesota. We will see it spread and destroy every fragment of opposition. It may not come in 1894 or 1895, but it is as inevitable as fate. As your Mayor has remarked, the Architect of the universe has ordained the St. Lawrence as the great natural highway to the sea. We cannot wipe that out even if we would. It was fixed when the continent was formed, something that cannot be obliterated,

that cannot be changed. And as God has pointed out the way let us make haste and walk therein.

John Brown—Mr. Cooley, of Chicago, has suggested that as most of the delegates are unaware of the position in which we stand with regard to the treaty of Washington, an explanation might be given by some one as to that treaty.

Mr. W. Mulock, M.P. and Lieut.-Col. Denison, M.P., stated that they were hardly prepared to express an opinion on the treaty on such short notice.

Col. Denison, continued—While I am on my feet I would like to take a few moments of your time to give the reason why I moved a resolution as to the canals last session. I noticed the Government had decided to build a new canal at Soulanges. The reason of their building on the north side of the river was because it was considered cheaper to build a new canal than to deepen the old one at Beauharnois. That being the case, I wished to place before the House my opinion that the Government should not continue the old policy of a 14-ft. waterway, which had been decided on twenty or thirty years ago. I felt that times had changed in twenty years, that the vessels now on the Lakes were larger than before, and I thought we ought to inaugurate a new policy of 20-ft. canals. In the building of our canals we have been acting like a crab—we are working backwards. My idea is that we should start at the sea and work towards the Upper Lakes. With that view I advocated the work being started at Soulanges, and as our means would permit it should be carried on as a Dominion enterprise. It has been suggested that the Canadian people might deepen their canals alone and unaided, and as a *quid pro quo* the United States should give us some advantage in the way of reciprocity to make up for it. I think that there may be something in that suggestion. I hope this Convention will be a great success.

Congratulations from St. Paul.

Chairman Thompson read the following telegram from St. Paul:

St. Paul, 17th September, 1894.

The Commercial Clubs of Minneapolis and St. Paul send greetings to the Deep Waterways Convention, and trust that its deliberations will result in some practical plan which will secure the early construction of a 20-ft. channel from Lake Superior to the sea. We favor joint action between the United States and Canada in deepening the St. Lawrence and nationalization of its waters as per Treaty of Washington.

W. J. Footner,
President St. Paul Com. Club.

J. F. Calderwood,
President Minneapolis Com. Club.

LETTER FROM MR. KEEFER, C.E.

The following letter from Thos. C. Keefer, C.E., was read:

OTTAWA, September 11th, 1894.

J. Enoch Thompson, Esq., Chairman Committee on Deep Waterways, Toronto:

DEAR SIR,—I beg to acknowledge receipt of your Committee's printed invitation to the Convention to be held in Toronto on the 17th inst., and also your note of 28th ult., requesting me to read a paper before the Convention on the cost of canal deepening.

I have sent the members of your Committee a printed paper relating to the object of your Convention, which was read at Chicago, in August of last year, before the Water Commerce Congress of the Columbian Exhibition.

I do not know that the material exists for estimating the cost of canals between Lakes Erie or Huron and Montreal and New York—upon the scale adopted by the United States Government for the Upper Lakes—but I believe some estimate has been made for this scale, upon the St. Lawrence route—based on the cost of existing works—by the Department of Canals, at Ottawa. An application to that department would, no doubt, give you the best estimate which can now be made.

Whatever conclusions the Convention may reach as to deeper water, and longer and larger locks between the Upper Lakes and tide water, I hope it will give precedence to an unanimous resolution in favor of the earliest possible completion of the enlargement of the St. Lawrence Canals which is now in progress, and upon which more than half of the estimated cost has been expended. In addition to about twenty millions of dollars estimate for the St. Lawrence Canals, more than half of which have been already expended, some twenty millions more have been expended upon the Welland and Sault Ste. Marie, from which little value can be had for the through commerces until the St. Lawrence Canals are completed.

The estimated cost of the last enlargement of the Canadian Canals, in progress since 1873, is some forty millions of dollars. This will give you something to go upon in estimating for another enlargement, which would be about as great an advance upon the one yet in progress as this one was in advance of its immediate predecessor.

My own view is that any further enlargement of the St. Lawrence route—Lake Erie to Ocean—must be an international work, such as was carried out upon the Rhine and the Danube, and I believe that the St. Lawrence affords the only deep water route, whether the destination be Montreal or New York, via Lake Champlain.

I remain,

Very truly yours,

THOS. C. KEEFER.

TUESDAY, SEPTEMBER 18TH—MORNING SESSION.

The Convention assembled at 10 a.m.

Vice-President Smalley took the chair.

Mr. Smalley—We shall now have the pleasure of listening to a paper by Mr. J. Enoch Thompson, who has taken such a lively and intelligent interest in this Convention.

DEEP WATERWAYS.

Mr. J. E. Thompson—This paper I am about to read will contain many facts which have already appeared in the papers. Many of the facts and figures given here have been printed before, but they were new to me and doubtless will be to others in this Chamber who have not previously been interested in the canal question.

Most people know in a general way that the commerce of the Upper Lakes has attained large dimensions, but few are prepared for the immense array of figures which confront them in whatever direction they look up statistics of Lake traffic. The freight carried on the Great Lakes exceeds in one season of seven months 30 millions of tons, being equal to one-fourth of the freight carried by all the railways of the States in twelve months.

The traffic carried through the St. Mary's Falls Canal, the one connecting link of the 20-ft. waterway that is completed, exceeds that carried through the Suez Canal, as will be seen by the following statement:

ST. MARY'S FALLS AND SUEZ CANAL TRAFFIC.

	St. Mary's Falls Canal.			Suez Canal.		
	18 3.	1892.	1891.	1893.	1892.	1891.
No. vessel passages ...	12,008	12,580	10,191	3,341	3,559	4,207
Tonnage, net registered	9,849,754	10,647,203	8,400,685	7,659,068	7,712,028	8,698,777
Days of navigation....	219	223	225	365	365	365

The value of freight carried on those Lakes exceeds in one season 342 millions of dollars ($342,522,000).

The lowest rate charged by railways is 5.04 mills per ton per mile, charged by one of the great coal lines. The average cost, according to the United States

Interstate Commission, of 9.22 mills per ton per mile. The average cost to the shipper by lake steamer is 1.03 mills per ton per mile. In one year's business which passes through the St. Mary's Falls Canal the saving to the shippers, as against railway rates, equals 64 millions of dollars. It is only as those figures are known that the immense importance of deep waterways is realized.

The Canadian Canal System.

From the head of navigation in Lake Superior to the sea there are about 70 miles of canals required to make the connecting links in this magnificent waterway furnished by Nature. These have been constructed by Canada at her own expense, but the increased traffic and size of the vessels employed make them inadequate for the present day. The following table gives the length, size and cost of the Canadian canals:

Canals.	Depth, in Feet.	Length, in Miles.	Cost.
Sault Ste. Marie	22	3/4	$ 2,243,890
Welland	14	27	23,762,294
Galops,	9	7 7/8	
Rapid Plat, } Williamsburg Canals {	9	4	2,940,551
Farran's Point, }	9	3/4	
Cornwall	9	11 1/2	4,649,574
Soulanges, } duplicate {	14	14	4,750,000
Beauharnois, }	9	11 1/4	1,611,690
Lachine	14	8 1/2	9,686,684
St. Lawrence River improvement			943,178
Total		85 3/8	$50,587,856

The above figures include the estimated cost of the Soulanges Canal, not yet finished, which is a duplicate or alternative route to the Beauharnois Canal on the opposite side of the river. Here we have an expenditure by Canada of $50,587,856, with not over three millions of her people directly interested, while the United States, having seventy-six millions of her people living in the States bordering on the Lakes, has spent only $7,931,900 on the improvement of the waterways which are used on the same terms by the vessels of both nations. Whether we consider the question from the point of population benefited or the products to be transported, we find the United States interest largely preponderate. By population the United States has 89⅞ and Canada 10⅛ per cent. of those directly interested in canal deepening.

The percentage of exports does not vary very much from this proportion, whether we take wheat, the chief staple, as the standard or include other cereal crops. The following tables from the United States and Canadian official reports of 1892 show the immense importance of the traffic affected by the cost of transportation:

CEREAL CROPS FOR 1892.

(United States and Canadian Government Returns.)

STATES, ETC., DIRECTLY BENEFITED BY DEEP WATERWAYS.

STATE.	Corn.	Wheat.	Oats.	Value.
	Bush.	Bush.	Bush.	
N. Dakota	375,000	34,998,000	12,510,000	$21,851,979
S. Dakota	17,700,000	31,707,000	18,472,000	26,292,851
Minnesota	24,192,000	41,210,000	43,573,000	46,280,854
Wisconsin	27,347,000	8,814,000	50,572,000	30,460,536
Michigan	23,218,000	23,854,000	27,800,000	36,395,489
Illinois	165,327,000	28,370,000	75,093,000	92,313,853
Indiana	103,334,000	39,885,000	29,175,000	76,779,597
Ohio	83,853,000	38,022,000	26,304,000	70,291,659
Total	445,346,000	246,860,000	283,529,000	$400,675,818
Ontario	11,229,498	28,782,892	64,758,053	$35,148,740
Manitoba and North-West Provinces		14,453,835	11,654,090	8,671,178
Total	11,229,498	43,236,727	76,412,143	$43,819,918

STATES INDIRECTLY BENEFITED.

Colorado	2,773,000	2,504,000	2,836,000	$ 3,525,526
Kansas	145,825,000	70,831,000	44,094,000	93,502,292
Nebraska	157,145,000	15,670,000	43,131,000	60,855,554
Total	305,743,000	88,005,000	90,061,000	$157,883,372

The wheat harvest for all Canada (1892) was 48,182,295 bushels.

The total crops are :

	Bushels.
Corn	762,318,498
Wheat	378,101,727
Oats	450,003,143
	1,591,423,368—Value, $602,000,000

It is not claimed that these immense crops, or even the greater part of them, will find an outlet through the deepened canals, but whatever increase in price is gained by improved transportation will apply to every bushel of grain raised in the West by whatever route it reaches the East.

Mr. Jas. J. Hill, President of the Great Northern Railway, is on record as having made the following statement :

"The Government engineers propose to give us 20 feet of water. We shall accept the 20 feet and use it when we get it, but I promise you whenever they will guarantee me 18 feet I will build a line of boats that will carry 6,000 tons instead of 3,000, which is now the limit, and cut the present cost of lake transportation square in two."

There is another material advantage to be secured by the enlarging of our canals of special interest to the Americans. They own a magnificent fleet of over 300 large steamers, which are land-locked and idle during half the year, having no employment during the winter months. Enlarged canals will enable the large lake vessels to reach the sea, where the ports of the world are open to them, so that their crews may earn wages and the vessels engage in profitable trade during the season when lake traffic is closed. Among such vessels I might mention the

"Owego"	350 feet long.	
"Harvey P. Brown"	359	"
"Selwyn Eddy"	Carrying	4,364 tons.
"Maritana"	"	4,771 "
"North Wind"	"	3,600 "
"E. C. Pope"	"	3,830 "

Estimates of Cost.

Various estimates have been made of the cost of deepening the canals. They vary from 50 to 75 millions of dollars. The expenditure even of the larger sum would not be an unreasonable price to pay for the benefits to be derived from it. Mr. E. L. Corthell, the celebrated Engineer, made an exhaustive report on this undertaking about two years ago as follows :

To increase the present canals and rivers to 14 feet (part of this has since been done)	$12,750,000
To enlarge Welland Canal 14 to 20 feet, including greatly enlarging the locks, etc.	25,000,000
To deepen St. Lawrence Canals and River 14 to 20 feet	27,000,000
	$64,750,000

The same Engineer estimates the cost of enlarging the Erie Canal at $250,000,000.

Whatever the cost may be, the important point is where will the money come from. If the financial aspect were viewed simply as a business transaction free from feelings of national sentiment it would not present any serious difficulties.

Few will contradict the statement that a twenty foot waterway to the head of the Great Lakes would prove of such undoubted advantage to so large a section of the United States and Canada that its cost, distributed according to the territory and interests beneficially affected, would be a comparatively small matter. Such a waterway would vitally affect the interests of the States that

are tributary to Duluth, Chicago, Milwaukee, Detroit, Ashtabula, Cleveland, and a hundred other lake ports as well as the Canadian North-West.

If the City of Manchester, single-handed, can afford to spend $75,000,000 on a canal, surely it would not be a stupendous undertaking for a dozen large cities, at the head of which is the great City of Chicago, to divide between them and the territory behind them the cost of this undertaking. While the only practical route is within Canadian territory, the business of that country is not sufficient to justify her undertaking the work alone. We might take a hint from our municipal methods on the question of finance: When a street requires paving the cost is assessed against the property on each side of the street, and every owner pays in proportion to his frontage. It would seem reasonable to apply this principle to canal deepening which is neither more nor less than improving the road in front of the respective properties interested.

Canada has already spent more than her proportion, and recently there have been indications of a growing disposition on both sides of the line that the deepening of the canals should be a joint and international affair. The St. Lawrence River, the greater part of it wholly within Canadian territory, and the Great Lakes are free, without restriction, and it would seem to be a simple matter to declare the 70 miles or so of artificial waterways as part of the great water highway and governed by the same navigation laws. Such seems to be the opinion of many prominent men in the United States and Canada.

On 8th February, 1892, the following resolution was submitted by the Interstate and Foreign Committee of Congress:

Resolved, That the Senate and House of Representatives of the United States of America, in Congress assembled, that the President of the United States be and he is hereby requested to invite negotiations with the Government of the Dominion of Canada to secure the speedy improvement of the Welland and St. Lawrence Canals and St. Lawrence River, so as to make them conform in depth and navigability, so far as practicable, to the standard adopted by the Government of the United States for the improvements now in progress within the United States of the waters connecting the Great Lakes, and to that end the President is hereby authorized, if he deems expedient, to appoint three commissioners to negotiate, on behalf of the United States, with the representatives of the Government of the Dominion of Canada, the terms and conditions of any agreement which may be entered into between the two Governments, in pursuance of any proposition submitted in that behalf by the Government of the Dominion of Canada.

Manitoba and the North-West Interested.

Similar views were expressed in the Canadian House of Commons on 30th of April last, when Mr. J. Martin, Member for Winnipeg, said: "I may draw the attention of the House to this fact, that not only are we in Manitoba and the Territories vitally interested in a question of this kind, but the people of the Northern States are vitally interested in this question (20-ft. canals), and it appears to me that in view of the immense expenditure that will be necessary our Government should endeavor to obtain co-operation and a joint expenditure with our friends to the south."

On 19th July last the Manitoba Central Farmers' Institute at Brandon passed the following resolution :

"That inasmuch as the works now in progress on the Upper Lakes are calculated to furnish within the next two years a channel of 20 feet in depth, from the head of the Lakes to Buffalo, it is most essential, in the interests of the North-West as well as the country at large, that the depth of the Welland and St. Lawrence Canals should be further increased so as to make a channel of a uniform depth of 20 feet to the ocean.

"That inasmuch as the entire route is essentially an international one, and as the canals forming part thereof on either side of the line are by international treaty dedicated to the use of the citizens of both countries on equal terms, the work and the expense of further deepening the Welland and St. Lawrence systems ought to be undertaken and borne by both Governments, so that the two countries shall contribute to the entire cost of the undertaking in proportion to their respective interests therein.

"That the whole water route, from the head of the Lakes to the sea, should be put under control of a permanent joint commission to be appointed by both countries, and its protection should be guaranteed by international treaty.

"This Institute rejoices to learn that the Council of the City of Toronto are taking steps to hold an international conference at an early date, with a view to the advocacy of such a scheme."

The celebrated engineer, L. E. Cooley, in an article on enlarged waterways, referring to a paper by Mr. Corthell, says : "The project is international. I can agree with Mr. Corthell that the problem cannot be hemmed in by artificial boundary lines. Nature did not fashion the continent with a view to such limits, and the solution of the problem is a contribution to Nature and an addition to the resources of the continent. Among a kindred people drawing prosperity from the same commercial resources, statesmanship should be broad enough to make the most logical interpretation of the physical and commercial conditions."

Mr. Bates, with a wide experience, is quoted by the well-known engineer, E. L. Corthell, as saying : "Such a waterway would be a blessing to both countries, and the direct and indirect advantages which would accrue to the citizens of each, invite the cordial co-operation of the respective Governments. It should form a bond of Union between the two greatest nations, and is a step towards that time when all nations shall be at peace."

The River Danube furnishes transportation from the wheat fields of our European competitors flowing through Austria-Hungary, Servia, Bulgaria and Roumania. In 1892 their wheat crop was :

	Bushels.
Austria-Hungary	185,347,206
Bulgaria	40,758,105
Roumania	59,828,160
Servia	4,000,000
	289,933,471

Here is a crop of wheat equal to that of seven States and Canadian Provinces combined in active competition with us. The Danube, through which those crops reach the British market, was, in 1856, declared free to all nations and is managed by two Commissions, one representing the European powers and the other the States on the banks of the River. It would seem that the position of the States and Canada is somewhat similar to the Danube principalities and similar methods might be adopted. The farmers of the West require passage for their products to the East free from obstacles or restrictions. No tolls are now charged on the Erie or St. Mary's Falls Canals and every foot of navigation from the head of Lake Superior to the Sea should be free.

It is not creditable to our boasted civilization and resources that no joint effort has been attempted to make the seventy miles of canals available for the largest vessels in use on the Lakes. The completion of this work would give an impetus to the business of both countries and it is necessary to enable the farmers of the West to compete with the cheap labor of the East and the fertile fields of Australia and the Argentine. There will doubtless be public men on both sides of the line who, under a mistaken idea of patriotism, will find objections to any plan of joint control or construction, but I venture to say such opposition will not be found amongst the tillers of the soil whose prosperity depends on cheap transportation. True patriots will sink all sentimental differences and boldly advocate what is for the common good.

The Military Side of the Question.

Sometimes reference is made to the military side of the question. Should such an unfortunate contingency arise as hostilities it would make no difference whether the canals were on American or Canadian soil. The strongest would take possession of them, therefore, that point need not be discussed further than to suggest that if owned jointly neither country would wantonly injure them.

The millions of Western farmers are surely entitled to as much consideration as a few Gloucester and Massachusetts fishermen for whose benefit the United States Government paid 5 million dollars to secure them fishing privileges in Canadian waters, or the citizens of the Pacific Slope for whose benefit it is reported the United States will contribute 85 millions towards the construction of the Nicaragua Canal. The interest of the United States is so much greater than Canada's, the volume of her products so much larger, that it is unreasonable to expect Canada to provide all the funds for what is a mutual benefit, and she is not likely to do it.

Both governments should be urged to appoint Commissioners to formulate some plan for providing funds in proportion to their respective interests to deepen the canals to 20 feet and to arrange for their future management and control. It might be considered desirable for Canada to complete the canals and sell or lease the free use of them to American vessels, or debentures for the purpose might be issued and payment assumed by each country according to their respective interests; or a plan similar to that by which the Canadian Government relieved themselves of building the C.P.R., after having spent 37 millions on it. The work already done was transferred to a private company, a subsidy of 25 millions

of dollars and a grant of 15 million acres of land were added, and subsequently the Government guaranteed 3½ per cent. on an issue of 15 million dollars' worth of bonds. With this assistance the C.P.R., costing 200 millions was successfully built, and has been a financial success and of great benefit to this country as well as to the States.

A private company, with a capital of 150 millions, might take over the existing canals; the money already spent might be considered a bonus, to be supplemented by a similar bonus from the United States, and the work of completing the 20-ft. channel to the sea could be carried out as the C.P.R. has been built, under such restrictions and conditions as the two Goverments might agree upon.

Mr. Corthell, in his report previously referred to, says: "Direct trade with Europe should be the demand of the North-West and of all the people tributary to it. The direct pecuniary advantages to the people should not be estimated at less than 200 millions per annum."

The Freight to Liverpool.

It costs more to raise wheat in the Western States than in other countries; in addition to this the Western farmer pays 200 and 300 per cent. more freight than his competitors to market his crop. Wheat costs in Dakota 35 cents per bushel to raise; in California, 22 cents; in India and the Argentine, 13 cents.

The freight to Liverpool is:

From Dakota	28	cents per bushel.
" San Francisco	18	"
" Duluth	15	"
" India	11	"
" Argentine	10	"
" Danube	8	"

At the present prices the Western farmer barely gets cost, while his rivals receive a fair profit. He cannot reduce the cost of production, but improved waterways will reduce the cost of marketing probably 50 per cent. from Duluth. Some expect even a greater reduction, and that is the object of this Convention to secure.

In conclusion it might be interesting to give the quantities of wheat produced by the chief countries in active competition with the Western farmer which ship direct to Liverpool:

	Bushels Wheat.
Danube Principalities, as above	289,933,471
Russia	241,578,934
British India (1893)	268,000,000
Argentine	29,394,666
Australia	37,096,221

Siberia is building a transcontinental railway, which will throw her surplus of 30 million bushels on the market; the opening of the Nicaragua Canal will bring

the California crops into sharp competition with us, so that no time is to be lost in providing the Western farmers with improved transportation to enable them to meet on equal terms the water-borne harvests of the world.

TORONTO, September, 1894. J. ENOCH THOMPSON.

DISCUSSION ON ALD. THOMPSON'S PAPER.

Mr. Smalley—Discussion on Mr. Thompson's paper is now in order.

Mr. R. C. Steele—I feel somewhat diffident in undertaking any criticism on Ald. Thompson's paper, but there is one phase of it that I certainly cannot allow to pass without comment. The idea that this Convention would sanction the proposition to enlarge the canals as a local improvement is too narrow an idea altogether. It seems to me the enlargement of the canals is an improvement in the benefits of which the whole Continent is going to share. Then why should those who live in close proximity to the waterway be the only ones to be taxed? A majority of the people of the United States are agriculturists. The prosperity of the country depends upon them. The whole country is going to be benefited, and we must view the matter before the Convention on the broadest lines.

Mr. Thompson—When I referred to the local improvement plan I supposed Canada on one side of the street and the United States the other. The improvement would benefit the two nations as a whole.

Mr. Dobell—I think this paper is of such importance that it should be printed and distributed to all the members of this Convention.

Mr. Flower—This is the fifth convention I have attended, and this one contains the most brainy men of them all. Mr. Thompson's paper is to me like the Ten Commandments. I don't see how you can leave any of them out without destroying the whole fabric. I don't see how that paper can be discussed at all. It almost covers the whole ground. There are a few things, however, which don't appear in that paper and to which I might refer. In the first place, the people of Toronto are a little bit opposed to the Convention because they think it will concentrate trade in Montreal; and secondly, it is thought that the trunk railways, when the proper time comes, will concentrate themselves at Ottawa and Washington and defeat the object of this Convention. I think that is a mistake. Mr. Shaughnessy, of the C.P.R., has told me that that railway would do whatever they could in behalf of deepening all the waterways to the ocean, his theory being broader than any I have heard, viz., that it would cheapen the freight of the products of the North-West. If it would make the farms more valuable in Dakota and Manitoba the railways could well afford to stand behind it, because it would develop the North-West and create a demand for the produce, and make a far greater business for the railways in winter and during the period of navigation, too. Have you taken notice of another thing? Mr. VanHorne and Mr. Hill, the one a Yankee in Canada, and the other a Canadian in the States; what are they doing—and they are two of the shrewdest railway managers in the world?—They are going into the steamship business themselves. They have built the finest steamships

floating in fresh water. What does that mean? Simply that water is cheaper than land for transportation. These men are more vitally interested than anybody else in deepening the waterways, because they have built large ships, expecting that later on others will come to their views and help to deepen the canals. I can say positively that the railways of the North-West will not oppose, but will rather support the project. When it comes to a final analysis I think there will be very little opposition indeed to it. What opposition we shall encounter will be in the heads of the politicians who will talk of future war and tariffs and artificial barriers, and so on. Mr. VanHorne runs a Canadian railway into American territory, and no one says a word. Why should there be any more trouble about a waterway between the two countries than a railway?

On motion of Mr. McGuirk, Mr. Thompson's paper was referred to the Committee on Resolutions.

THE WASHINGTON TREATY.

Mr. O. A. Howland—I was requested last night by the Committee on the Order of Business to fill the gap in reference to the question which has been raised as to the terms of the Washington Treaty, and how it refers to this matter.

To go a little further back than the Treaty of Washington, the Gulf of St. Lawrence was made free to the commerce of both nations by the Treaty of 1783. When we come to the time of the Washington Treaty, another step was made in the direction of civilization. The Dominion of Canada, without equivalent or return, as we consider it, consented to make it an element in the Treaty that the navigation of the St. Lawrence in the first place, and the use of the canals in the second place, should be open on equal terms to the subjects of both countries. The exact clauses on these subjects are very brief, and it is perhaps as well we should have them in mind.

Article 26 of the Washington Treaty.

"The navigation of the River St. Lawrence, ascending and descending from the 45th parallel of north latitude where it ceases to form the boundary between the two countries, from, to and into the sea, shall for ever remain free and open for the purposes of commerce to the citizens of the United States, subject to any laws and regulations of Great Britain or of the Dominion of Canada not inconsistent with such privilege of free navigation."

Then the clause as to the canals is in part a mutual clause, and reads as follows:

Clause 27.—"The Government of her Brittanic Majesty engages to urge upon the Government of the Dominion of Canada to secure to the use of the citizens of the United States the use of the Welland, St. Lawrence and other canals in the Dominion *on terms of equality with the inhabitants of the Dominion.*"

The return for that was: "And the Government of the United States engages that the subjects of Her Brittanic Majesty shall enjoy the use of the St. Clair Flats Canal on terms of equality with the inhabitants of the United States, and

further engages to urge upon the States' Governments to secure to the subjects of Her Brittanic Majesty the use of the several State canals connected with the navigation of the lakes or rivers traversed by or contiguous to the boundary line between the possessions of the high contracting parties on terms of equality with the inhabitants of the United States."

As to the historical facts arising out of that Treaty, we know that the United States has performed that part of the contract which was within its own power. I say nothing as to performance by the States. The United States Government has always granted the use of the St. Clair Flats Canal (the title to which, it has been discovered lately, lies really within Canadian territory, although it was supposed to have been within the jurisdiction of the United States). Every portion of the route within United States control from Sault Ste. Marie has been freely granted to Canadian vessels on the same terms as the vessels of the United States, until a certain period of recent history when the Treaty was practically abrogated. The cause of the abrogation was a dispute between the two countries on the application of those words : "on terms of equality with the inhabitants of the other country." The Canadian Government did not understand that the terms in this Treaty were intended to interfere with any regulations it might make to encourage the complete use of its whole system of canals. The St. Lawrence Canals were unfortunately not enlarged *pari passu* with the Welland Canal. The consequence was that a class of vessel began to be used for navigation through the Welland Canal which could not be sent down the St. Lawrence, and they went only as far as Ogdensburg, and the trade was being, by virtue of the impossibility of going through the St. Lawrence Canals, taken away from the ports, for the sake of which the Canadian Government had expended so much money to complete the canals. A regulation was applied for by the vessel owners of the smaller class that vessels which descended the St. Lawrence Canals might be recouped to some extent by a rebate of the tolls paid on the Welland Canal. The Government considered that application and granted it in terms which applied not to the vessels of any one nation, but equally to all vessels which should follow that route to the sea, to Montreal, instead of using only part of the system of canals. We are not going to debate in this Convention the legal question whether that was a correct interpretation, whether it was just and equitable or not. It is sufficient for the purposes I am going to urge that a difference arose between these two Governments, that radically different opinions were held by the people of the two countries, that a good deal of feeling was excited over it, and that the dispute was settled by a kind of violence. The United States insisted that there was a breach of the Treaty. Finding their arguments did not prevail, they made a corresponding breach in the Treaty, namely, by regulations in regard to the Sault Ste. Marie Canal imposing a discriminating toll on Canadian vessels. From their point of view that was an admitted breach of the Treaty. In the case of the regulations made for the use of the Welland and St. Lawrence Canals, there was no question of nationality, it was a question of route. The American vessel was as free to take advantage of those terms as the Canadian vessel. Therefore there was, at all events, I think it will be admitted, an arguable question as to the right of the Canadian Government to do this. But the United States Government met it by what was admittedly a breach of the

terms of the Treaty. The trade of Canadian vessels in the northern lakes was so large and important that the Canadian Government was compelled to yield the point in order that Canadian vessels might have the use of the Sault Ste. Marie Canal. Now we know that the Canadian Government has under completion at Sault Ste. Marie a canal of its own, which will make the Canadian line of navigation complete ; so that should that question in any way arise again, the Canadian Government's position cannot be met in the same peremptory manner as it was at that time. Thus we see that under any international treaty questions may arise from time to time, and that at the present time there is no means of settling these questions by some mutual authority which commands the confidence of both countries.

There is a moral for us in this history of the Washington Treaty. That Treaty was supposed to be a liberal one. It was to have a beneficial effect upon the relations of the two countries. As a matter of fact it became the cause of difficulties which almost rose to a dangerous point.

A Common High Court Suggested.

This Convention will want to recommend means that will make sure that no such results will follow from the measures it is going to recommend. (Applause.) We know that in every great agreement where there are two contracting parties, looking forward to the interpretation of that agreement in the future, it is usual to provide for possible difficulties being settled by some system agreed upon. A very common clause is an arbitration clause : it is very often used in regard to private matters. Arbitration has been used very largely in international matters. But there are very great objections to a provision of that kind, supposing it were practicable to insert one in an international arrangement. Arbitration always involves a great many preliminary difficulties and obstacles. A dispute arises and has to be carried to a certain length before there is a cause for arbitration. Then there comes the appointment of arbitrators, which in international matters often causes very unpleasant discussions. We remember under the Fisheries clause of the Treaty how much feeling was caused on the question of the appointment of the arbitrators. That kind of thing should not be possible. There are two wings to the movement we have in hand ; one is the commercial and financial, the other the political. It is easy for us to advance on one wing to convince the people of this Continent that it would be a great economical advantage to them to have these waterways enlarged on a grand and perfect scale. But that would be useless, unless we accompanied it with work on the political line, work that will make it certain that we will not be met with complications arising out of international feeling and international suspicion. In my opinion we should recommend, contemporaneously with what we recommend in an economical sense, the consideration of the question of the formation between these two nations of a common High Court for the settlement of all kinds of difficulties of an international character between them which may arise from any cause whatever. (Applause.) I consider that a mere arbitration clause in an agreement relating to this particular matter would not effect the object in view. It is to be remembered that all agreements are set aside in the event of the breach of the great agreement of peace between different coun-

tries. I agree with one of your speakers that the question of war seems to us a notion perfectly abhorrent and verging on the impossible. We may think so in our hearts, and our wish may be father to the thought. Remember that the Governments of countries are bound to look forward to contingencies, which they must regard without being influenced by hopes or philanthropies. We must expect that the liberal attitude which ought to be brought to this whole question by both countries cannot be brought to it unless the possibility of war is shown to be removed by institutions so adapted to secure that result that every reasonable man will say that war between the countries is as impossible a contingency as war between the various Provinces of the Dominion, or between the States of the American Union. (Hear, hear.) Therefore it impresses me—and I hope this Convention will agree with me—that there is a necessity of urging simultaneously upon the different Governments the consideration of the formation of an International Court of a permanent character with an ascertained jurisdiction, with powers to execute its findings, so that it may appear that every possible question that may arise in the future has been provided for, and a way out has been made, by means that commend themselves to the sense of justice and equity of the whole people. Unless we do that we shall not be making the progress we ought towards the end we wish to attain.

I shall not detain you with any further remarks. I shall ask permission to introduce a resolution on the subject.

THE STATE CANALS.

Mr. Dobell—I wish to state a fact which Mr. Howland has omitted in his valuable remarks on the treaty of 1869. He stated that the most liberal construction was expected to be given to that Treaty. The Treaty provided that we should give the use of our rivers and canals to the Americans on the same terms as we were to enjoy. Under that Treaty American vessels leave New York and come via the Richelieu River and Carillon Canal to Ottawa where they load lumber back for New York. You would naturally think our boats would be entitled to the same privilege; but such is not the case. I brought this matter before the Foreign Relations Committee at Washington, and they contradicted me and said what I stated was impossible. I challenged them to disprove my statement. Mr. Blaine sent for the treaty and read it. He found I was correct. A small canal about 15 miles long in New York would not allow Canadian boats to go through. I asked the Committee if they were using their best endeavors to obtain from the Sovereign State of New York a reciprocal privilege for us in regard to that canal. If they had used their best endeavor to effect this purpose I don't think there would have been any difficulty.

On motion of Mr. Suydam, Messrs. Howland, Dobell and McGuirk were asked to prepare resolutions to cover these questions.

Mr. A. McFee—Mr. Howland referred to a rebate on business going to Montreal. It was a condition that this rebate applied merely on cargoes that were transhipped in Canadian waters. For instance, a shipment from Chicago to Montreal would receive the rebate, but not if it were transhipped at Ogdensburg.

Mr. Howland—As to that detail I submit to the superior information of the gentleman from Montreal. The main point I was endeavoring to make was that a difference arose on the construction of the treaty and it was found there was no means of removing that difficulty and we should contemplate better arrangements for the future.

Mr. Brown—In seconding the resolution appointing this Committee, I would like to say that this matter of the so-called discrimination of charges would be entirely wiped out if the purpose for which this body has met should eventuate. I hope we will take such action at this Convention that a misunderstanding in the course of trade and traffic will never again be possible by either Government. We will have 20 feet of water and no transhipment.

Mr. Winton, of Beeton, thought we were seriously handicapped by the operation of the Imperial Navigation Laws, which allowed free entry into British ports of foreign shipping under charters from other British ports. No such privilege was granted our freight carriers in United States ports. While an American vessel may take cargo at Montreal or Halifax and discharge at Liverpool, or any other British port, we were not allowed to take cargo from New York or Boston to San Francisco, even around Cape Horn.

CANAL CONSTRUCTION.

Mr. L. E. Cooley—I am somewhat embarrassed in being called on to give a paper on Canal Construction. This paper has not been prepared. I am obliged in a measure to speak my thoughts as they have been suggested to me during the last day or two. In inviting me to read a paper your chairman referred particularly to the question of the various routes and of the cost of a deep waterway to the ocean. We have two Governments, each with an engineering corps for the purpose of preparing estimates of this kind, and it is their work to prepare estimates of the work in question when we convince them of the necessity of its construction. I have been engaged for some time looking into this problem of a deep waterway to the sea. I gave it much consideration in 1888 and 1891. I have been engaged for some time gathering the various maps and profiles in regard to all the routes between Chicago and the seaboard. I haven't mastered them all yet, and I think it will be a matter of six months before all that material can be digested, so that any opinion which I may state to-day will be in the nature of a lawyer's curbstone opinion, subject to revision.

In the past ten years great progress has been made in the construction of ship canals. We have the Manchester Ship Canal, the North Sea Canal, and one at Chicago that is bigger than any of them. The result of this experience was to throw an entirely new light upon the whole question of canal building, and it will convince the public in regard to the cheapness of the proposed work and its possibilities. I have in my pocket an index of the facts I wish to present. I prepared it principally because of a remark I once heard made in Chicago in regard to a man who was recognized as extremely able. "Yes," said the commentator, "that is so; but he hasn't got his brains indexed."

Taking this Continent as a whole, looking at it geographically and from the engineer's standpoint, it is simply one design, one theory, from the Isthmus of Panama to the North Pole. There is but one problem in it, and it has no relation whatever to international boundary lines. If you look at the topography of the country you will discover throughout the Continent a trough running from the Gulf of St. Lawrence to the Gulf of Mexico, a distance of 3,800 miles, and in that trough, and on the two slopes that extend from the Alleghany and Rocky Mountains down to the bottom of the trough, and from the North Pole down to the Gulf of Mexico, is to be found 80 per cent. of all the material resources of the Continent. (Applause.) From the Chicago standpoint the central idea is that there is only one waterway possible on the Continent as a whole, and that is a waterway from the Atlantic by way of the Great Lakes to the Gulf of Mexico. We at Chicago are on the summit of that trough, and we are able impartially to look down both ways, 1,800 miles to the Gulf of St. Lawrence and 1,600 to the Gulf of Mexico. Within the environs of Chicago a raindrop could split on a blade of grass and part run each way. The divide between the Great Lakes and Mississippi system is only 8 or 10 feet above the level of Lake Michigan, and Chicago is to-day cutting a channel through it. The bottom of it is on the exact level of the Niagara River at Buffalo, 900 miles away, so you can see by what a narrow margin the geological formation of the Continent favored the St. Lawrence route rather than that by the Gulf of Mexico. The idea which I wish to impress on you is the idea of

A Trunk Waterway,

establishing a circuit through the heart of the Continent. Chicago is cutting the summit of the divide in order to establish this circuit. We are building a channel 26 feet deep. Chicago is spending 25 millions on the work, and in the next 20 years she will spend as much more on this enterprise. She is moving more material than was moved in the building of the Manchester Canal. If we had to build the Suez Canal we could do it at half the cost we are paying on this work. We could complete the German Canal for much less money than it is costing them. Our excavations at Chicago are being done for less than two-thirds of what they were able to do similar work in Great Britain. These facts have an important bearing on the matter we are discussing. The rock work on the Chicago Canal is being done for less than one-half of the contract price. The actual cost to the contractor is not over one-third of what it was estimated it would cost by our Government engineers. That is an illustration of how cheaply canal construction can be carried on with the most approved machinery for doing the work.

When Capt. Dunham attended the Detroit Convention, three years ago, we were not able to urge any plan for its consideration. Chicago then had only 16 feet, while it has a commerce of 11 million tons, which is equal to the commerce of Liverpool. It is one-seventh of the total entrances and clearances of all the ports of the Great Lakes, and yet the harbor is in a miserable little creek. Now that we are building this channel, a very little expenditure will give us the best harbor in the Lakes. So that

Our Attitude has Changed

since the Convention of Detroit, three years ago. We don't want anything less than 26 feet deep to the sea. I want to say right here, that in my opinion, when

we make an effort to get to the sea, we can get a stronger sentiment in the West and in the Mississippi Valley for 26 feet than we can for 20 feet, and we can get it quicker. There is not a city west of the meridian of Detroit that will not use every endeavor and every argument and every resource to urge a plan that will give them access to the sea without being tributary to anybody on the route. They would prefer to have the time postponed a little longer, if necessary, rather than have something done which might for a time, and possibly for a generation, postpone the consummation of that idea. I think it would be well to give you some little idea of what ship canals mean, and I would not be a loyal Chicagoan unless I pointed to this diagram and showed you that we are out-doing by a little anything that anybody else has done. Our canal has the same depth as that of Manchester and Suez. It is 40 feet wider in the rock cutting than at Manchester. When that channel at Chicago is completed we will have brought the Mississippi navigation and that of the Lakes within 60 miles of each other. They are now 320 miles apart. We will turn enough water from the Lake to raise the Mississippi one foot at St. Louis, and add 225 miles of navigable water to the Illinois River. We have put ourselves in a position to have 14 feet of water to the Gulf of Mexico and 26 to the Atlantic. The channel will make tributary to us the Mississippi Valley, the future bread-basket of this Continent. We will be able to use that route 9 months in the year, or 2 months longer than the Canadian route. We don't expect to do a large foreign trade in that direction. We do, however, expect to extend our commerce in the South, a region where we have not yet a stronghold. We expect to reach the Carribean, Mexican and South American coasts, very few harbors in which have more than 14 feet of water. This route is in no sense a rival to the lake route to the ocean; it is supplementary thereto.

I wish to point out another thing to you. We are building a channel right past Chicago, starting at Chicago and sending Lake commerce right through, and doing it with our own money. We had a good many people in our town who thought that was extremely unwise, thinking the City of Chicago would be transferred to the other end of this channel. We had people in Chicago who, when Wm. Ogden started the Galena road, the first railway that went west of Chicago, opposed the enterprise because they thought Chicago would be transferred to the end of that road. The State of New York, when it chartered the Lake Shore road out of Buffalo, would not permit it to connect with the New York Central because it threatened to destroy the teaming and transfer business of the City of Buffalo.

I don't think, and no one in Chicago thinks, that the prosperity of that city is based on the idea of levying tolls on farmers. Our supremacy will be maintained by reason of what facilities we can afford for collecting and distributing the products of the country. I don't think any city can maintain prosperity on any different plan for a long time or much longer than the rest of the people can combine against it.

Traffic Statistics.

There are some traffic statistics that have an important bearing on the question of route. The census returns for 1890 showed that the Lakes were carrying 20 per cent. of the ton mileage of the United States. If you allow that the balance of the shipping of the United States is equally well employed then it

follows that more tons of freight are to-day transported by water than by rail. That is one fact. Then take the Detroit River. Twenty-six and a-half million tons of freight passed through there last year. Less than 4 million tons crossed the river by the railways. Take the City of Chicago. There is not a week in any summer season, there is not a year in the last five years that more freight has not gone east by water than by rail. Of the entire commerce of that port, over one-third is done by water. These are facts you want to lay close to your mind in considering this question.

Another point: Take the census of population of cities in the United States of over 10,000, over 90 per cent. of that population is located on navigable waters. That is why people gather there. If you draw a line from Sandy Hook round by the Great Lakes, down the Mississippi to the Gulf of Mexico and back along the seaboard you have 68 per cent. of the city population of the United States. What are cities for? To transact commerce. That's what makes them, and sometimes I think that it is extremely fortunate that Providence has placed navigable waters alongside the big towns. I don't know how they get there unless it was specially done. (Laughter.)

Railway Opposition to Waterways.

Another point: There is a good deal of talk about railway opposition to waterways. I don't believe it exists. I don't believe any intelligent railway manager is fighting waterways. If there is he ought to be retired. Some time ago a gentleman who was then the controlling spirit in the largest trunk line running North and South made this remark: he said, "if you are building a little route to cut rates we are against you, but if you are building a big route which will divert commerce in this direction, we will get our share of it and we will promote such a scheme in every way we can."

I have the same opinion from different railway men in Chicago, whose lines compete with us in the South. The railways which are paying dividends are running in competition with water in every case. Railway managers have, during the past 15 years, been discovering that fact.

The Question of Route.

There are certain general considerations as to the question of route. In looking at the question of route I consider it as an engineer would consider the location of a railway from the seaboard to Chicago. In building such a road engineering questions are not leading questions. The object of the road is to get traffic, and I would run my first line through all the traffic points I could reach, in order to get the support of everything possible along that line. In a case of this kind I would also like to get the people's moral support. Later, when that railway had developed a large traffic, and we found there was a great movement to the seaboard, and the road was overtaxed, I would begin to build a loop-line. I would shorten the route wherever I could and relieve the congestion of traffic. The same theory ought to prevail in regard to a canal route from the Upper Lakes to the Atlantic, modified to some extent by the question of cost and what we can afford to pay.

In considering the question of origin we have two points, Chicago and Duluth, which we recognize have a place on the map, too. These are the starting-points in any waterway. The Atlantic Coast, New York, Philadelphia, Baltimore, etc., receives several times the traffic from the West that goes to foreign ports. New England alone receives more than is exported. Furthermore, the movement of domestic freight is steady and constant. The foreign movement is heavy some seasons and dull others.

Domestic and Foreign Transportation.

If you consult the history of canals and railways you will find that the line of domestic transportation determines the line of foreign shipment. You have your Welland Canal. There never was a time when that was not a better route than the Erie Canal; and yet there never has been a time that the Erie didn't carry five times as much as the Welland. These are facts we have to take into consideration in determining the best route. From the waterway standpoint there is another important fact which the engineer considers, and that is the question of free water. I was once told by an eminent ship builder that one of the great Cunard liners cannot make its best speed unless it is running in a thousand feet of water. I believe it is true. We all know the effect of steaming in a restricted channel. In regard to canals, it would be an extraordinary one that would allow a vessel to make 5 miles an hour. Then as to lockage. I think great improvements are about to be made in locks, by which the evils of lockage will be greatly diminished. You have to allow ten miles for every lock. The question of length of route is not the point in regard to a canal. It is the length of time to make the trip through it. The distance from Chicago to Toledo is 180 miles. A canal between these points would cost $750,000 per mile. We could start a lake propeller at Chicago and run her quicker round Michigan than by any canal that money can build. What is the use talking of it?

The American Standpoint.

Now let us get at the application of some of these ideas on the practical side. Take the question from the American standpoint. We are obliged to come into Lake Ontario on any theory that I can formulate. We can't escape that. Then we are divided as to the Mohawk and Champlain routes. All routes that are possible from the Lakes to the American seaboard go through the Hudson valley. We are obliged to construct it in the vicinity of Albany, either by the Mohawk or Champlain route. To properly build the Mohawk route so that boats can go through it with any degree of speed and satisfaction, will, in my opinion, cost three-quarters of a million dollars per mile. The distance is 180 miles.

The Champlain Route

Is down-hill all the way. It would afford a wider and deeper route. In the Mohawk route there might be a difficulty about the water supply; but that, I believe, can be overcome. Looking at the country as a continent, without reference to boundary lines, I am entirely clear on the point that the first deep water development should be to the Atlantic seaboard by the Lake Champlain route,

with an incidental section by way of Montreal for foreign commerce. If I owned the country as a Czar I would start and make 20 feet through all that line as quickly as it could be done. (Applause.) I would put all permanent structures down to 26 feet. I would construct the work in such a way that there would be no more difficulty in adding 2 feet to the depth from time to time than now exists in deepening the shallows of the Lakes. That is the policy upon which I should work. At the same time, there will come up the question of shortening the route, and it will be a shorter time in the future than most of you will imagine When that time does arrive you can spend money more profitably in deepening than in shortening. Deeper and larger boats will carry freight cheaper than smaller boats on shorter routes. Ultimately the congestion at the locks will have to be relieved by short cut-off routes.

I wish to give you some facts in regard to the Sault Ste. Marie Canal lock. Last year the actual working time of boats going through the locks was 160 days out of 230 days of navigation. There are times when boats are delayed there for a considerable length of time. For all practical purposes the limit of the old lock of 1881 is now reached. So there is a limitation in regard to what a canal will do.

As far as we represent Chicago we are not here to agitate any particular route. If anyone has a route, be it long or short, by which he is going to get deep water to the sea, we will bid him God-speed. We simply want to get there, and get there quickly. I believe that in 8 or 10 years any canal you might build to the American seaboard would develop a commerce that would practically overtax it. I am prepared to believe that 20 years will see a commerce of 50 millions through any route which may be built. There will be room for all the projected canals, Ottawa, Hurontario, Mohawk. They will all come in their proper order, according to the efforts and ability of the men who are pushing them.

The International Aspect.

I think I have now covered the leading points from an engineering point of view. The other side of the question, the international aspect, lends a gravity to the matter. There ought to have been no boundary in the first place. (Laughter.) The commissioners who laid it out didn't lay it out with regard to water routes, or they would have included the sweep around by Rouse's Point in the United States, the territory where this Champlain route ought to be made.

Mr. Brown—What is the matter with taking the rest of Canada? (Laughter.)

Mr. Cooley—Well, that is a matter for you. I know there are a good many Canadians in the United States. I am not sure but a large body of the people of the United States would be willing to trade a good part of Maine for the land we need to make the Champlain Canal. (Laughter.) In considering this question we must, to a certain extent, ignore these boundary lines, or subvert or provide for them in some way, so that when we attack this work we virtually go at it for all commercial and practical purposes as one people. How that is to be brought about I don't know. I hope some one will be here to point that out, and that there are statesmen big enough to solve it. Just as surely as this Continent is laid out on one grand plan, independent of boundary lines, just so surely will the

people be bound together by commercial links that will ignore all questions of internationality.

Mr. Brown—Our people have been asking concerning the feasibility of the construction of a 20-foot channel down the St Lawrence. I understand Mr. Cooley, in conjunction with other engineers, has the engineering facts and surveys in connection with that matter.

THE ESTIMATED COST.

Mr. Cooley—You have Mr. Corthell's estimate of 27 millions for a 20-foot waterway down the St. Lawrence. I have no doubt it can be done for that sum—that is, from Lake Ontario to the sea. Then we have an estimate of $23,000,000 for the proposed canal on the American side, between the Niagara River and Lake Ontario, by way of Tonawanda. These estimates are official. In looking the matter over I have no doubt we can build the canal proposed in a far more elaborate style than contemplated for $23,000,000. So the estimate for making a 20-foot channel from Lake Erie to the sea is 50 millions, that is on the supposition that the Welland would not be utilized on the new system. If the Welland were used, the locks would have to be lengthened. We have boats 130 feet larger than the Welland Canal locks. It would be better to build a new canal altogether. The Welland Canal has about three times as many locks as it should have. To project the work in such a way that you could obtain a 26-foot channel in the future need not add a great deal to the cost. I should say that could be provided for by adding 30 or 35 per cent.; but I would not want to present that figure with confidence. I only judge from what I know of the Chicago enterprise. The route giving 20 feet of water from Lake Champlain to New York would cost $50,000,000. If we only had the necessary territory, we could get to the American seaboard for one hundred millions.

A Delegate—Are there any natural advantages in the proposed Tonawanda Canal over the Welland?

Mr. Cooley—No, except we get a little better system of locks. There is a fall of 326 feet between the two lakes. In building the Chicago Drainage Canal, we were advised to use the old canal across the divide, but we found it absolutely cheaper to build an entirely new channel, rather than revise the old one, and maintain the traffic while we were doing the work. I have the lake and river charts down to the boundary line, and I find that down the St. Lawrence there is a general average depth of 50 feet. It is obstructed in places by shoals and here and there by rock and reef. My limitation in regard to the depth of the canal is 26 feet. I should not be surprised, in 3 or 4 years, to become convinced that 30 feet would be more desirable, but it must be remembered that when you get beyond 26 feet, the proportion of shallow water becomes very large, and the liability of injuring deep draft is so great that it is doubtful if it would pay to go deeper than 26 feet.

Mr. Faulkner—What would be the cost of deepening the St. Lawrence so that vessels could make the down trip?

Mr. Cooley—I do not know. I have not considered that question. I should say, up to 20 feet it could be done. There is a good deal of uncertainty in moving rock in a heavy current.

Mr. Faulkner—I understand Capt. Harbottle says for a million or so he could make a channel for a 20-foot vessel.

Mr. Cooley—I would sooner his boat would make the trip than mine.

A Delegate—What route would you have to take to keep altogether in American territory?

Mr. Cooley—The Mohawk is an altogether American route.

Mr. Battle—On the Welland Canal there are 25 locks in a fall of 326 feet. How many of these locks could be done away with?

Mr. Cooley—The French build little locks, 21 feet wide, 130 feet long and 10 metres or 39 feet high. There is no reason why the Welland should not have locks of 40 feet, and I don't know but you could exceed that. The locks in the Welland are 15 feet. When we reach Montreal with our commerce, if we have no Champlain route, we are still further from the Atlantic coast than if we remained in Chicago, because Montreal, by the sea route, is 2,000 miles from New York or Boston. The deepening of the canals to Montreal would only provide for our surplus products. My belief is, you would be disappointed in a purely St. Lawrence route. But if the Champlain route were built in connection with the St. Lawrence system, Canadian vessels would save a thousand miles going to the West Indies. The proportion of shallow water in the Hudson is not very large. There is less shallow water to dredge in the Hudson than the St. Lawrence. Taking the whole route, from Chicago to New York and Montreal—1,265 miles to Montreal and 1,440 to tide water in the Hudson—you could get a route that will not have more than 100 miles of canal, nor more than 100 miles of shallow water.

Mr. Goulder—How far is Troy from the St. Lawrence by the Champlain route?

Mr. Cooley—From St. John to Troy dam is 200 miles.

Mr. McFee—Can you give us any idea of possible rates?

Mr. Cooley—I see no reason why you should not carry traffic from Duluth to New York for one dollar per ton.

Mr. McFee—As against the present rate of how much?

Mr. Cooley—$4.80 by rail from Duluth.

Mr. McFee—How does the Champlain route compare in length with the Erie Canal route?

Mr. Cooley—It is 200 miles longer.

Mr. McFee—Don't you think the railways will meet any competition that improved waterways may bring on?

Mr. Cooley—No; I do not. Improvements in steam navigation during the last 10 years has kept ahead of the improvements in railway transportation.

Mr. McFee—Is not the return cargo a very important factor in rates in the Upper Lakes?

Mr. Cooley—Yes; a return cargo cheapens the rate.

Mr. Nettleton—I think I understand you to say you must get into Lake Ontario?

Mr. Cooley—Yes.

Mr. Nettleton—If you could get into Lake Ontario by the Georgian Bay Canal or by a ship railway, wouldn't that be the best route? It would save 300 miles.

Mr. Cooley—We cannot afford to side-track Lake Erie, which is our most important lake from a commercial standpoint.

Mr. Smalley—Is it worth while considering the use of lake vessels for ocean traffic? Is it not a fact that lake vessels are not strong enough for the ocean?

Mr. Cooley—I think if you had connection with the high seas you could have boats that would sail in both waters. I think our present fleet would do it all right.

Mr. Smalley—Our experience in sending whalebacks to the Pacific was not satisfactory.

Mr. Cumberland—What is the depth of water between New York and Albany?

Mr. Cooley—They are asking to get 14; they have 9. Up to within 30 miles of Albany there is 20 feet of water.

Mr. Wheeler—What effect would the building of a 20-foot canal have on the mean level of the Lakes?

Mr. Cooley—I don't think it would amount to a practical question.

The Convention then adjourned till 3 p.m.

TUESDAY, SEPTEMBER 18TH—AFTERNOON SESSION.

The Convention resumed its sitting at 3 p.m., Ald. J. E. Thompson in the chair.

The following letter was read from the Chamber of Commerce, Duluth:

"Owing to the terrible calamity in the shape of forest fires, our city within the last two weeks has become a veritable city of refuge as well as hospital. We have had as many as twelve hundred to feed, and to some extent, clothe. Under these circumstances almost every active member of the Chamber of Commerce has been engaged in relief work, and your invitation and the matter of appointing a delegation has been lost sight of. I am instructed on behalf of the Chamber of Commerce to express profound regret, and to assure you that this body has earnest sympathy with the great object of your convention, and it is to be hoped that your deliberations will be attended with abundant success."

THE ECONOMY OF THE 20-FOOT CHANNEL.

Mr. Peter McIntyre then read the following paper:

In dealing with the subject of cheap transportation, a retrospective glance at the history of the carrying trade of the St. Lawrence River and Great Lakes will be instructive.

My own experience in steamboat and transportation business goes back to the year 1867, when the various Provinces were welded into what is now our great Dominion. At that time the Welland Canal locks admitted vessels of 144 feet length, 26 feet beam and 10 feet draft, while the St. Lawrence locks admitted vessels 180 feet long, 45 feet beam and 9 feet draft. I have never been able to see the wisdom of having this difference in size of the canals; and when, in 1874, our Government commenced the work of enlarging the Welland Canal to 270 feet by 45 feet and 14 feet deep, and left the St. Lawrence system unimproved, I failed to see the wisdom of commencing the improvement of a waterway at the terminus instead of at the natural starting point.

It seems to me that it would be well for us to-day, in recommending any improvements in our waterways, to keep this fact fully in view, and see that the error of the past is not repeated, but that the future improvements start at tide-water and work upwards. Those of you who were in the vessel business of those early days will remember the fleet of Welland Canal propellers trading from Montreal to Chicago, and the large fleet of N. T. Line propellers running from Ogdensburg to the West. The moment the Welland Canal was enlarged these small boats found it impossible to live in competition with the larger class of vessels that were built the full size of the new canal, and one by one they disappeared, were either lengthened to 180 feet or put on other routes. To-day the Canadian fleet in the Montreal trade is reduced to about 10 or 12 steamers, the majority of which tranship their cargoes at Kingston into light-draft barges, while the Ogdensburg fleet consists of large steamers like the "Haskell," "Prince," "Governor Smith," and others, carrying 65,000 bushels of wheat to their destination.

The rapid increase in size of the vessels on the Chicago and Buffalo route within the past five or six years is remarkable, and the fact of the "S. S. Curry," a steel steamship of the most recent type, carrying 5,130 tons cargo into South Chicago on a draft of 18 feet, the other day, shows that the era of large-sized lake steamers is here to stay.

It must pay to run such large craft, or the shrewd Western vesselmen would not continue building them. Another fact it is well to remember is that while there is no doubt if a 20-foot channel was in existence from the Great Lakes to the ocean a great many of the ocean freight steamers would find their way to our lake ports, but still the modern lake steamer must be a vessel of 20-feet draft in order to get the maximum of economy in carrying.

In order to show the economy of running the large vessel as compared with the small one, I have estimated the earnings and expenses of a whaleback steel steamer, full size of the present Welland locks, of the model made by Mr. W. E. Redway, Marine Architect, of this city, who has given considerable attention to

designing of such craft, and a similar steamer 350 feet long, 42 feet beam and 20 feet draft water, both of a 12-mile speed. Supposing they could run through to Montreal without breaking bulk, taking full cargoes of wheat down at five cents, and bringing back half their capacity of freight at $1 per ton, the result is that the large vessel can earn a 20 per cent. dividend, while the smaller one, under precisely similar conditions, can earn only 14 per cent. In other words, the large steamers could carry grain from Chicago to Montreal for four cents per bushel, and earn as good a dividend as the smaller vessel getting five cents. This represents a saving which runs up into the millions when it is applied to the vast grain crops of the West and to the freight moving from east to west.

Statement via Welland.

Estimate of earnings and expenses of a steel steamship of the Redway model, 255 feet long, 42 feet beam and 14 feet draft water, on the route from Chicago to Montreal, via the Welland Canal, 1,266 miles:

Cost of vessel	$115,000.	
Speed	12 miles per hour.	
Consumption of coal	1,800 lbs. "	
Time, Chicago to Montreal	140 hours	Total, 360 hours.
" Montreal to Chicago	160 "	
" in port	60 "	
Carrying capacity	75,000 bush. wheat, or 2,250 tons, on 14 feet.	

Estimated Earnings.

13 trips of 75,000 bush. (975,000 bush.), at 5 cents	$48,750	
13 trips, 1,125 tons upwards, at $1	14,625	
		$63,375

Estimated Expenses.

Wages and board 21 men, 210 days, at $35	$7,350	
Coal, 230 tons per trip, 3,000 tons, at $3	9,000	
Engine expense, oil, etc.	500	
Elevating 975,000 bush., at ¼ cent	2,437	
Shovelling 975,000 bush., at $4 per 1,000	3,900	
Shortage 975,000 bush., at $2 per 1,000	1,950	
Canal tolls on 29,350 tons	2,925	
Canal tolls on 14,625 tons up	1,462	
Customs fees, etc.	500	
Outfit and repairs, at 2½ per cent.	2,875	
Insurance, at 4 per cent.	4,600	
Management	2,000	
General expenses	2,000	
	$41,499	
Depreciations, 5 per cent. on $115,000	5,750	
		47,249
Net profit, 14 per cent., or		$16,126

STATEMENT VIA ENLARGED SYSTEM.

Estimate of earnings and expenses of a steel steamship of the Redway model, 350 feet long, 42 feet beam, 20 feet draught water, on the route from Chicago to Montreal, via the Welland Canal, 1,266 miles:

Cost of vessel	$225,000.	
Speed	12 miles per hour.	
Consumption of coal	3,000 lbs. "	
Time, Chicago to Montreal	140 hours	Total, 360 hours.
" Montreal to Chicago	160 "	
" in port	60 "	
Carrying capacity	151,000 bush. wheat, or 4,530 tons.	

Estimated Earnings.

13 trips of 151,000 bush. (1,963,000 bush.), at 5 cents	$98,150	
13 trips up, 2,265 tons, at $1	29,445	
		$127,595

Estimated Expenses.

Wages and board 23 men, 210 days, at $37	$ 7,770	
Coal, 430 tons per trip (5,590 tons), at $3	17,770	
Engine expenses, oil, etc.	750	
Elevating 1,963,000 bush., at ½ cent	4,907	
Shovelling 1,963,000 bush., at $4 per 1,000	7,852	
Shortage 1,963,000 bush., at $2 per 1,000	3,926	
Canal tolls on 58,890 tons down	5,889	
Canal tolls on 29,445 tons up	2,944	
Customs fees, harbor dues, etc.	750	
Outfit and repairs	5,625	
Insurance, 4 per cent. on $225,000	8,000	
Management	2,000	
General expenses	2,000	
	$70,183	
Depreciations, 5 per cent. on $225,000	11,250	
		81,433
Net profit, $20\frac{51}{100}$ per cent., or		$46,162

I estimate that a steamer of the large size (350 feet) could make two trips per month during a season of seven months, but I allow the time of one trip for unforeseen circumstances, detention, fog, etc. I expect, of course, that all the artificial or improved channels will be made as easy to navigate as science and money can make them.

The river navigation between Montreal and Quebec is somewhat difficult, but the excellent system of buoys and beacons for day, and range lights at night at almost every bend in the river, makes navigation of this river to-day a far easier

task than it was thirty years ago. With our canals with the latest improvements in locks, draw instead of swing bridges, the crooked places made straight, proper appliances for the safe handling of the large craft in the locks, I feel confident that as good time can be made navigating our canals and rivers with the steamer carrying 150,000 bushels as with the steamer carrying 50,000 bushels.

The immense strides made during the past few years in the size and speed of the Atlantic passenger steamers and the improvements in marine boilers and engines all go to show that improvements can be made on our lake craft, and although the speed of the Atlantic liner is not needed for our lake transportation, yet the economy derived from large size and improvements in machinery must be taken advantage of if we wish to keep pace with the times and hold our own in the great race.

I have taken 12 miles per hour as being the most economical speed, but I am confident that the improvements that are being made in the most modern marine engines and boilers will warrant a speed of 15 miles per hour. At this increased speed two more trips could be made during the season at the cost of coal and canal tolls, which would add to the dividends very materially.

PETER McINTYRE,
Steamboat Agent.

THE ST. LAWRENCE ROUTE.

Mr. Blain—Mr. Chairman and Gentlemen: The subject on which I am to address you is one that has occupied my attention for a great many years. I need hardly deal with that portion of the river that is below the City of Montreal. The Dominion Government has, at very large expense, afforded facilities for vessels drawing 27½ feet of water from tidewater to the port of Montreal. But, in ascending the river from Montreal, we find several obstructions. In the first place, from Montreal to the head of what is now the Lachine Canal, a distance of 8½ miles, we have two systems at present in existence that apply to these portions of the river as well as other portions of the river. The vessels coming down with heavy cargoes run the river from the City of Kingston to Montreal without touching the locks. As a matter of course, in ascending the river it is essential that there should be lifts to overcome the rapids that are now overcome by the locks. So I have always had in my mind the desirability of affording the vessels ample accommodation to pass from the City of Kingston to Montreal, whether they draw 7 feet, as they do now, or whether they draw 14 feet, as they will do when the contracts that are now let by the Canadian Government for these portions of the navigation are completed, or whether, as may be in the future, we may be able to get 20 feet of water from the head of the Lakes to tidewater. Going down they will have a running speed of not less than 15 miles an hour, and in some places more, because, as you can understand, the boat must go faster than the current of the river in order that it may have headway and so be governable by the helm. The nature of the stream forces the vessel to the deepest channel, and, except for the danger of turning the vessel and striking on the rocks, they are perfectly safe in running the rapids.

The question arising is a practical one—what will be the expense of getting 20 feet of water on this river from Kingston to Montreal, and what will be the additional expense that will give us lockage to enable us to ascend the river? I have here charts of only a portion of this river. The distance from Montreal to Kingston is 175 miles. From Kingston to the head of the Galops Rapids probably an expenditure of a few thousand dollars might be wanted to improve the channel. But there is now 30 feet of water and practically not the slightest difficulty in passing down this distance, being 110 of the 175 miles from Kingston to Montreal. From the head of the Galops Rapids down to Cornwall but little expenditure will be needed in order to secure 14 feet of water. There are three small canals known as the Williamsburg canals between the Cornwall canal and the head of the rapids. These, like the other canals, are under contract to be deepened, and the whole work will be finished, as the Minister of Public Works expects, inside of three years. When that is done we shall have 14 feet of water from the head of the Lakes to tidewater. From the point I have indicated to Cornwall the expenditure would not be very great. When we come down the river a little to the first point shown on these charts, we find that considerable expense will be required to afford the necessary facilities for navigation. But when you go still further down and reach that portion of the river whose difficulties are now overcome by the Beauharnois Canal, and will be better overcome by the construction of the Soulanges Canal on the north side of the river, very considerable outlay will be necessary. But here again the outlay for 14 feet of water will be comparatively little. But in the entire stretch of water from Kingston to the head of the Lachine Rapids the portions I have referred to are the only portions where there are serious obstructions to a 14-foot channel. But you can very well understand, that, as Mr. Cooley said this morning, the deeper you go down into the river the more obstructions you will find, and in going from the head of the Galops Rapids to the head of the Lachine Canal it might be quite safe to say that in a great many places there would be a few of the hard heads in the bottom of the river that would have to be blown off, but in some other places there would have to be a good deal of work done. I think probably I might safely say that 17 feet of water could easily be had all the way down to the head of the Lachine Rapids and there would be no insuperable difficulty in getting 20 feet of water from Kingston to Montreal. It will be a matter of expense of course, but it will not involve anything like what the people have calculated on in the past. I was very glad to find from the instructive discourse that we had from Mr. Cooley to-day that he gave such an estimate as he did of this work. Let me say, that in Parliament they have estimated the whole work from the City of Montreal to the west end of the Welland Canal to cost something like $120,000,000.

Mr. Cooley today gives you the idea that the work can be done for $50,000,000, and I am glad to be able to say, after carefully examining the subject, that so far as the $27,000,000 estimated by Mr. Corthell for the St. Lawrence River is concerned, I very strongly believe that that would be ample. I had the impression that the authorities in the United States had calculated the expense of the canal on the other side of the Niagara River at a much higher figure than Mr. Cooley's—that they had put it at $39,000,000.

Mr. Cooley—Not in recent years.

Mr. Blain—I was not quite sure of it, and I have no doubt Mr. Cooley's figures are correct. So that this would give us facilities for vessels drawing 20 feet from Lake Erie—and that means from the head of navigation, for the works are virtually completed—to tidewater at a very moderate figure indeed.

I noticed that while Mr. Cooley was speaking a great many gentleman in the convention were anxious to see what the effect of these works would be. I do not profess to deal with that question fully, but I may say that the people of the Eastern States require 300,000,000 bushels of grain to sustain their population. I made enquiries of the largest shipper in Toronto what he would carry grain for from Port Arthur to Montreal, and his answer was six cents a bushel. What could we carrry it for with a 20-foot system of navigation? Three cents. The calculation is easily made. On the grain required for the Eastern States alone, you have a saving of $6,000,000, or a saving of 12 per cent. upon the entire outlay Mr. Cooley has spoken of.

And, gentlemen, that was but one item. As the gentleman representing the United States last night said, I have been considered a crank on this subject. I am not at all displeased at that, for the crank is a very important part of the machine. I did intend to draw your attention to the river below the Lachine Rapids, but my friend Mr. Coumee, who will second my resolution, has examined that portion and is prepared with a plan showing 20 feet of water and only one lift between the foot of Lake St. Louis and the City of Montreal, and when he comes to second my resolution or move one himself, he will give an explanation of how that can be done. Reaching the head of the Lachine Canal, we have a long stretch through Lake St. Louis the depth of which will be 50 or 60 feet. There will probably be a little spot at the second lighthouse where some small dredging would be required, but that is a mere trifle. We ascend until we come to the entrance to the Beauharnois Canal. That is about 11½ miles in length and has nine locks. The intention is to build a new canal and contracts are let for a canal 13 miles in length to overcome both the shallow water and the rapids on the river. That canal, it is expected, will be finished in about three years. Above this we reach Lake St. Francis. The accomodations for shipping on that lake are so great that although the United States authorities have made the most minute inquiry as to the whole bed of the river—and these are the charts from the United States Department amended last year, the most approved charts of this river that we have—they found that it would be simply a waste of time to record the soundings of that lake, and therefore the lake is passed over without a single depth being given. What may be the depth of the lake I cannot tell, but I know that the record shows that in some places it is 120 feet deep. The point where the 45th degree of north latitude intersects the river is the point where the boundary line between the United States and Canada running westward traverses the middle of the river. Please remember that, because my resolution is intended to deal with this great scheme in two divisions, so that Canada may take the lower part and manage it, and the United States take the upper part and manage it. This is in order to get rid of the political influences on both sides of the line. Going beyond the point I last referred to we come to the Cornwall Canal. I assure you, as to the rest, there will be no difficulty in getting 20 feet of water down through

the river itself, and if we have sufficient capital invested in the lake trade we shall have no difficulty in overcoming the rapids. For the few miles above Cornwall to the head of the Galops Rapids I am not able to give you a clear explanation. There is but one chart in this city that gives the information and that was old Captain Bayfiel"s chart of 60 or 70 years ago, when the facilities for making the survey were not equal to what they are at present. But I do not hesitate to say, and I should be sorry to say it, if I was not sure of my facts, there cannot be the slightest difficulty in getting 20 feet of water from the head of the Galops down to the point I have spoken of.

When we come to the head of the Galops, ascending the river, we can have 30 feet of water if we want it; and, indeed, I do not thing there would be any difficulty in getting 40 feet. But there is no use in talking of that at present, seeing sea-going vessels require only 27½ feet. But we ought to have the waterways deeper than the draught of the boats. I want to point out clearly that it is absolutely necessary that we should go down this river from Kingston with our lake boats without the necessity of using the locks.

I have gone through the Suez Canal, and I suppose it is the best-built canal in the world, or it might have been. It is simply a straight cut through a sand-bank. Yet I find that, notwithstanding the fact that that country is so well suited to canal building, it is not possible for vessels to go faster than from three to four miles an hour. If it is possible for us to run down the rapids at 20 miles an hour, it is most important that we should not be confined to a rate of four miles. I have gone over the ground, every foot of it, several times. There is no serious difficulty except above the City of Montreal, at the Lachine Rapids. There the boat takes a plunge, and, as a matter of course, when the centre of gravity is suddenly transferred to the front part of the boat, she goes down and strikes heavily upon the water, giving a considerable shock. But in no case is there half the shock that I have experienced on board an Atlantic vessel when the vessel has leaped, as it were, from one wave to another. We can overcome that pitch without any difficulty, as I dare say Mr. Cooley, as a practical engineer, knows. We might improve the river at that point a little. The very nature of the river forces the boat down through the deepest water. I have it upon the very best authority, upon the authority of those who have actually navigated this river, that with suitable facilities, easily afforded, there is not the slightest difficulty in passing a loaded vessel drawing 20 feet of water, and having not less than 5,000 tons displacement, from Kingston to Montreal.

While I am on my feet perhaps you will permit me to say—as it is information that ought to be at the disposal of the convention, though I am not going to deal with it at length—that we have also surveys of that portion of the route which is known as the Georgian Bay connection with the City of Toronto. I may give a few facts in relation to that in order that you may consider the question. In the first place, we have a survey from Governor's Island, New York, and according to my recollection, Lake Ontario is 247 feet above tidewater. When we come up through Lake Ontario we find that the elevation of Lake Simcoe above Lake Ontario is 472 feet. The elevation of Lake Simcoe above Georgian Bay is 130 feet. If that is so, you will see that the altitude of Georgian Bay above Lake

Ontario is 343 feet. These elevations must be considered in any plan for a canal that is made. The cut through the ridges for a 20-foot canal, if fed by the waters of Lake Simcoe, would be 220 feet deep. The proposition, if I understand rightly, is that this canal is to come directly from Georgian Bay and to be fed from Georgian Bay. In that case, the cut at the apex of the ridges will be 350 feet deep. And a cut will average so much that I will be almost afraid to mention it, seeing that we have not had an instrumental survey. But I need hardly say that this would be an enormously expensive canal. It is proposed, I understand, to use the hydraulic principle in scooping out the mountain. But I do not see how we could use the waters of Lake Ontario to scoop out a mountain 350 feet above it. In California where they have an immense fall they can bring down the water in their pipes and turn the nozzle on the brow of the hill and scoop it out without difficulty. But that principle cannot be applied here.

It has been proposed that other means than deep waterways may be used. One is the ship railway, already incorporated, instead of the canal. Another—which is proposed by my friend Mr. Ketchum of the Chignecto Marine Railway, which it is expected will be finished before a very long time, and which when finished will carry vessels across the peninsula as vessels were carried 300 years before Christ's time, where the Corinth Canal now is—is to raise the vessels on pontoons, and thus carry them down without the necessity of making any changes in the canal. So that you will see we have three propositions to replace the miserable system of canals we have at present. A canal is like a chain, its strength is in its weakest link. The smallest lock upon a canal fixes the capacity of the canal and of the system. At low water a vessel can scarcely go through our canal system drawing 7 feet of water. As I have said, speaking in the House of Commons, the engineer who designed this system must have supposed that a vessel was like a rubber ball, capable of being squeezed to smaller dimensions without injury. I do not know of anything in which so much money has been lost as in our canal system. We are going to get rid of our present system and we are going to have 14 feet of water. That is already under contract. This work should have been finished long ago. When the various provinces agreed to confederate and form the Dominion of Canada this was one of the terms of union—that the Federal Government should improve these waterways so as to meet the convenience of the people of the great North-West. And let me say, gentlemen, that I have met some men sufficiently short-sighted to say that we want these waterways for ourselves. We want these waterways for the human family, and, for my part, I do not care whether the benefit is to this side or the other; it is in the interests of the producer, it is in the interests of the consumer, that we should have deep waterways, that we should have enlarged facilities for carrying from the head of the great Lakes that will enable us to reach tidewater and so to place our products in the markets of the world.

Mr. Smalley—I would like to ask whether if the deep waterway by way of the river is made, it would lessen the cost of boats returning from Montreal, or whether it would merely reduce the time of transit down the river.

Mr. Blain—I may say that I was very much struck with one remark of Mr. Cooley to-day, that we are constantly narrowing our facilities. The gentleman

who has asked the question will see that by facilitating transport down the river we more than double the capacity of our canals, we can do more than double the work we could do by going down the canal. And another point that might bear upon the case is, as generally recognized, the return freights, are usually not as great as the freights from the west to the east.

Mr. Flower—I would like Mr. Cooley to say whether there is any other way beside the St. Lawrence that would afford two channels to the sea, one carrying the cargoes by the quicker route and the other taking them through the locks.

Mr. Cooley—All things are possible in engineering, but there is no route that compares in cheapness with the St. Lawrence. I do not see any difficulty in the way of making two channels and that might be a useful thing. In fact, I believe they have already applied that at the Galops.

Mr. Blain—While Mr. Cooley is on his feet, I would like him to answer a question. We have been debating very seriously here whether we could not resort to the hydraulic lift and dispense with locks. Such a system, if practicable, would greatly reduce the expense necessary to give us the required facility for shipping.

Mr. Cooley—So far as the St. Lawrence is concerned, you have no rise on any canal over fifty feet except on the Beauharnois Canal, where there is a rise of 85 feet. I do not see any difficulty from an engineering point of view.

Mr. Alan Macdougall—We have heard about this engineering question, and, as an engineer, I would like to have the benefit of the opinion of some practical shipmaster as to what would be the effect of putting a ship upon one of these hydraulic lifts. When a paper was read before the Canadian Society of Civil Engineers on the question we are now discussing, it was brought out in the debate on the paper that many of the ship owners would not be disposed to have such large vessels as would carry 5,000 tons subjected to the strain likely to be caused by one of these hydraulic lifts. Every ship owner, I understand, dislikes to have his ship go into a lock, on the ground that it receives more or less damage every time it does so. If that is the case under the present system of locking, what would be the probability if, as engineers, we were to strive to replace the present system with hydraulic lifts? It has been suggested that in connection with some schemes it might be practicable to make a lift from 45 to 50 feet in height. That would be possible from an engineering point of view. The question is, even if this is accomplished, would it be of any advantage from an economical point of view. Would any ship owner allow his ship to be put into the lift and carried to that height? We have here many gentlemen who are interested in the shipping trade, and I would like, as an engineer, to have their opinion.

The Chairman called upon Mr. Suydam for an address.

Mr. Suydam, before beginning his address, made announcements with respect to future meetings.

Mr. Blain—I would like to mention to Mr. Suydam, as Chairman of the Committee on Resolutions, I handed in two resolutions last night, dealing with the project which is to be the subject of Mr. Moberly's address.

Mr. Suydam—All resolutions handed in are in the hands of Mr. Flower, who is the Secretary of the Committee on resolutions.

Mr. Flower—Even though we adopted a resolution not to receive resolutions after three o'clock, I am willing to take the responsibility of receiving any resolutions that may be sent in.

The Chairman—Unless objection is taken, it will be assumed that that resolution is suspended in the case of any resolutions handed in.

Mr. Suydam—Mr. Chairman and Fellow-Continentals: I like Mr. Cooley's thought this morning that he wished there had been no boundary, that we had been fellow-citizens. But we are glad to greet you here this afternoon as fellow-Continentals—not the "old Continentals" that we of the United States used to hear about, who went about in three-cornered hats and knee-breeches shooting the Britishers, but the new Continentals, who are here to make the waterways, the means of continued peace and improved trade. I am here to represent the twin cities of the North-West.

We claim, Continentals, that we are at the summit of water transportation, and we are just one hundred feet in our elevation higher than the City of Chicago. I think that justifies our claim. Mr. Cooley made another statement, in which I can go him one better, and I do not know but more than one. He said that if a drop of water fell at the centre of Illinois, part of it would flow to the Gulf of St. Lawrence and part to the Mississippi. But if a drop should fall at one point in Minnesota, parts of it would run in three different ways—one part to Lake Winnipeg, and so to Hudson's Bay; another part to the Mississippi, and so south, and the third part would go into Lake Superior, and so to the sea by the Gulf of St. Lawrence.

Now, we are here to ask to be placed not in the geographical centre alone, but in the hydrographical centre. We are very glad to-day that there has not been a shovelful of earth or a pound of rock taken out of the route of the Lake Superior and Mississippi Canal. That is the name by which our scheme has been christened. We are at the head of the Father of Waters. And we expect to bring there the mother of waters, and make such a union as will make our section the home of a great commerce.

When I lived in Chicago I thought a 12-foot canal was a wonderful thing, but since I have lived in St. Paul, and particularly since I have come to Toronto, I have learned that what we want is not a 10 or a 15-foot canal, but one of 20 or 26 feet. I am here to present to you an adopted child of my own.

[The speaker then outlined a project for constructing a canal from Lake Superior to the Mississippi River.]

Mr. McIntyre—I would like to ask what is the length of this canal?

Mr. Suydam—That depends on the route you take. From 150 to 250 miles. When I find that men are talking about constructing canals with locks of 80 or 90 feet and providing for a fall of 347 feet in 66 miles I think I can go back to Minnesota and tell them there is nothing for us to fear in overcoming an incline of 400 feet in 125 or 130 miles. Let me refer to another matter in Mr. Cooley's

address. He drew you a line around from the Lakes to the Mississippi River, but he did not take it far enough north. This project that I have told you of covers a larger part of the United States than any other that has ever been presented connected either with the Great Lakes or with the Mississippi River. I say that with all deference to the Chicago Canal, the wonderful waterway that is now being built. This Chicago work is well enough for the Southern portion, but it leaves the northern part of the country still at the mercy of the railroads and we expect to ask and urge that feature upon the convention and we believe that we are in good shape for progress.

Mr. McIntyre—What depth of water have you in the Mississippi at St. Paul?

Mr. Suydam—Only 4 feet at low water and at high water as much as 15 feet.

Mr. McIntyre—If you get the canal built to the Mississippi do you expect then to make a 20-foot channel down the Mississippi?

Mr. Suydam—Yes, ultimately. Then we will have the system which Mr. Cooley was describing from the Gulf of St. Lawrence by the Mississippi River to the Gulf of Mexico, taking in a larger part of the North American Continent possibly than any other system of canal construction that could be demonstrated on the on the map.

Mr. John Brown—I would like Mr. Suydam to say in what respect he thinks this proposed work an international one. He says that it will affect the Province of Manitoba. If so, it is news to many of us Canadians.

Mr. Suydam—It is very simple. It would bring the products of Manitoba that much nearer transportation by water and so lower the rate. In this relation I think this is as important a feature of the deep waterways project as any that we have discussed. I am not ready to go into details with you, but I believe in the deep water system that will connect the Mississippi River with the St. Lawrence.

Mr. Flower—There are two other canal projects that have not been mentioned. One is to improve the Red River of the North, so the shipping may move up and down, and then have a canal from Lake Superior by Rainy Lake and River to Winnipeg. A good many wonder why this canal and the one to St. Paul and a great many others of the same kind are mentioned in this convention. It is true the railroads do not build their side tracks and feeders first, before they construct their trunk line. But before a railroad man builds a line he considers this matter of side tracks and feeders and where they are to be built. All these little canals brought forward by their special projectors have a relation to the main subject before this convention, because we are asking for a deep channel to the sea and the better feeders we can have for it, the more successful that channel will be.

Mayor Taylor, Winnipeg—I do not wish to reflect on any great international scheme, but Mr. Brown has brought up the question, and it seems to me that his point was well taken. It has been stated by one of the speakers that it was contemplated to have a waterway to Winnipeg, by the Red River into Lake Winnipeg, and, I premise, on into Hudson's Bay. That would give the whole of Manitoba, the North-West Territories, Minnesota and Dakota an ocean port of their own,

without regard to the lake route; and if the other scheme were carried out, of having a route by Winnipeg River and Lake Winnipeg and the Lake of the Woods, across the Height of Land, it would give us access to the St. Lawrence system of navigation. I cannot see how this proposed canal is an international scheme, unless it is a feeder to bring the freight from Minnesota and the Dakotas through Canadian territory to Hudson's Bay, and thus by the shortest route to Liverpool.

Mr. Suydam—Even if this canal from Lake Winnipeg is built—and that idea has not met me before—it seems to me that it will only increase the value of this canal, but for a reason that may not strike you all favorably, that is, that we may not send our freights by way of the Lakes, but by way of the Mississippi River. I think that we ought to choose the best waterways route, without regard to province or country.

Mayor Taylor—I agree with you perfectly in that.

The Convention then adjourned till 8 p.m.

TUESDAY, SEPTEMBER 18TH—EVENING SESSION.

The Convention resumed its sittings at 8 o'clock, Ald. J. Enoch Thompson in the chair.

The Chairman—I will now call upon Mr. E. A. Macdonald for an address on the subject of the Georgian Bay Canal.

THE GEORGIAN BAY CANAL.

Mr. E. A. Macdonald—The subject upon which I shall briefly address you this evening is one which has agitated many minds, beginning with the time before I saw the light. And it pleases and inspires me to see one of the early movers in this project before me. I refer to the Chief Engineer of the old Huron and Ontario Ship Canal Company, Mr. Kivas Tully, who made all the surveys and collected all the data which have been of any use to our Company or to the public up to date. In the fifties or early sixties the traffic was so small that the company then incorporated could not hope to carry out their project as a commercial work unendowed by the Government, so they sought a grant of ten millions of acres of land, and I believe that negotiations were nearly completed, but the work was never carried out. But though interest in the work declined, it had never entirely subsided, and has been revived at different periods. Two years ago the matter was taken up again, several new features being added to the project. One feature, the power aquaduct feature, does not interest you as a convention. I may explain,

however, that there are two distinct features of the work in hand, one the power aquaduct, by which the Company can develop half a million horse-power from Lake Simcoe and the waters flowing into it. This one feature alone more than counterbalances the disadvantage of not having the old bonus of ten millons of acres of land. The productive power of the aquaduct makes Government aid wholly unnecessary. In Mr. Tully's work we find there were borings made to the depth of the bottom of the then proposed canal. That canal was to have as its feeder and summit level Lake Simcoe, which is 130 feet higher than Georgian Bay. The plan was to lock up to the level of Lake Simcoe, and down a corresponding distance. We propose to cut the canal through on the Georgian Bay level. In those days that would have been an unthinkable work. On the Lake Simcoe level the work was estimated to cost from $22,500,000 to $40,000,000, and on the Georgian Bay level, five times as much as that, or possibly even more. Such a stupendous undertaking was of course at that time simply out of the question. The promoters of this work did not realize that they had easily within control a power that would dig the canal in a comparatively cheap and simple way. I refer to the hydraulic method of excavation, which has only lately come into vogue, by means of which a canal can be made almost as cheaply on one scale as on another, that is, if the formation of the ground is suitable. Of course we cannot apply the hydraulic method in the excavation of rock, but for soil of the nature of that between here and Georgian Bay it will apply very well. I have here some plans which will give the Convention an idea of the work to be done.

[The plans were exhibited and explained by Mr. Macdonald.]

In the course of his explanation he said: The Nottawasaga River has slack water 15 to 30 feet in depth for a distance of 10 or 12 miles. Then the fall is gradual to a point within 48 miles of Toronto, where we propose that our tunnel shall commence. We know accurately the nature of the soil, except here beneath the summit and through the heavy cutting. The plan is to construct a 12-foot conduit, or larger if necessary, from a point 12 miles from Toronto to the point where dredging would be impracticable. The water of the Nottawasaga River and Georgian Bay is available in illimitable quantities. Gates would be constructed and means of controlling the water at will provided. Imagine this conduit made, and the water flowing into the tunnel. The tunnel is lined with wood—a temporary lining. I would like that clearly understood, because some attempt has been made to ridicule the idea on the supposition that this lining was to be permanent. The water coming down will, of course, destroy the end section of this lining—the force will be enough to split it into match-wood. That will leave the next section exposed, when a similar result would follow, and so on. The water would wash the earth away. Of course the only thing that keeps the tunnel from falling in is the pressure of the earth around it, and as that is washed away the earth will fall in and will be washed away in its turn. The question is asked, How if it should not fall? All we have to deal with is the earth at the end of the tunnel, as the lining gives way section by section. If any part does not fall in in its turn, a dynamite cartridge will easily bring it down, when it will be washed away by the water. The novelty of the idea has caused a good deal of comment, and even of ridicule; but if you stop for a moment and consider the power of

water, and the illimitable supply we have at command, you will see that the taking away of an obstruction of any size is only a question of the size of the tunnel. Some engineering gentlemen have asked, Suppose you strike boulders? We expect to strike them. But ordinary boulders will be carried away by the force of the water. Even the stiff, indurated clay will be broken up and washed away. The whole tunnel can be made at an infinitessimal portion of the cost of building the Canal by the old method.

Mr. Conmee—Have you had borings made?

Mr. Macdonald—We have had borings made below the level of Lake Simcoe, but we have had no syatematic borings made by our Company down to the level of Georgian Bay. While we are constructing the aqueduct this Fall we will proceed with the borings and test-pits all along the way. It is recommended that the borings be a quarter of a mile and the test-pits a mile apart. Those who have heard of this method of construction for the first time will regard it as new. But, while it is modern, it is not entirely new. It has often been used in Colorado and other Western States for irrigation purposes. They bore a hole through a mountain, and, if it is drift or earth formation, it is easily cut out by the flow of water running through the tunnel. If the method can be applied for 20 or 30 miles, you can easily see that it is only a question of power to apply it for a longer distance, and we have the power.

Mr. Conmee—What will be the effect of this earth flowing into Lake Ontario?

Mr. Macdonald—Why, we will simply be taking earth from districts where land is worth $25 to $50 an acre, and using it to make land where it is worth $1,000 an acre.

Now, Mr. Chairman, I have been reading a a great deal about this Convention, and I have studied the statistics showing the saving in the cost of carrying freight by improved waterways. The circular issued by the Committee states that carriage by water is seven times cheaper than carriage by rail. That may be so on long distances. But so far as the Lakes are concerned, I find by examination of the returns that the saving by water carriage as against rail is just about half. That is the actual cost reported on Chicago freight by water as compared with land. Of course there is no through waterway, but the combined rail and water route costs just about half that of the all-rail route.

We say that this Georgian Bay Canal will save a distance of 304 miles from the Upper Lakes to any Lake Ontario port, or 608 miles the round trip. In addition we propose to have, instead of a large number of locks as heretofere, just four very large locks to overcome the height of 347 feet from Georgian Bay to Lake Ontario. Another advantage is, that by using the hydraulic method of excavation we can make this canal as wide as may be deemed desirable. The great drawback in canals has been the slow rate at which vessels must go. I was over at Rochester, and saw the barges on the Erie Canal there going at a rate of 2 miles per hour, and I believe that 4 miles an hour is a very respectable rate even for the best canals. Upon this canal vessels will be able to go at the same rate as upon an open river. We intend to make this not only the deepest, but also the quickest artificial waterway in connection with the Great Lakes. It would be the most

direct and cheapest route for freight destined for the far East. Of course we never hope to divert the trade destined for Lake Erie ports.

Mr. Suydam—When do you expect to have this route ready for operation?

Mr. Macdonald—That will depend upon what we learn by further investigation. If the ground is such as we expect, we shall be able to build through on the Georgian Bay level; but if not, we will have to take the Lake Simcoe level. We know we can construct it on the Lake Simcoe level, but we have not the information to speak with certainty about the canal on the Georgian Bay level. We expect to have the work completed in 1898.

Mr. Suydam—What is the estimated cost?

Mr. Macdonald—From $30,000,000 to $40,000,000.

Mr. Suydam—Who made that estimate?

Mr. Macdonald—Several of our engineers.

Mr. Flower—How many days do you think would be saved in the transport from Lake Superior to Montreal?

Mr. Macdonald—I have never considered the question in that light. The Canal will save one-third the distance from Chicago or Duluth to Lake Ontario ports. You can easily make the calculation.

Mr. Flower—Is it to be an air-line canal?

Mr. Macdonald—Just about as the crow flies.

The Chairman—General discussion is now in order.

Mr. Tully—I have listened with a great deal of pleasure to the speeches made at this Convention. I was particularly struck with the statement made by His Worship the Mayor, at the opening of the proceedings, that the Congress of the United States had passed a resolution that three commissioners should be appointed to confer with the commissioners from the Dominion of Canada for the purpose of establishing a system of deep water navigation for the commerce of the Great West. Now, I have some little consolation to give you in this matter, and I think the point has not been previously referred to. While the great war was going on in the United States we were building up the Canadian Provinces. In 1864 there was a conference of the Provinces at Quebec, and at that conference the following was passed as the 69th Resolution, and was afterwards confirmed by the Act of Confederation, the Constitution of the Dominion of Canada:

"The communication with the North-Western Territories, and the improvements required for the development of the trade of the Great West to the seaboard, are regarded by this Conference as subjects of the highest importance to the federated Provinces, and shall be prosecuted at the earliest possible period the state of the finances will permit."

This work the Dominion of Canada has been carrying out. The contracts for deepening the waterways to 14 feet have been let, and it is promised that this work will be finished in three years. If this Convention declares that it is necessary to have 21-foot or 26-foot navigation, the Dominion of Canada, under the

resolutions that I have read, will be bound to carry that out, for there appears the express will of the confederated Provinces, that whatever is necessary for this trade from the West shall be properly carried out. I may mention that I believe myself to be the sole survivor of the convention that met here in 1855. I was not a delegate, but I was appointed by the convention to make a survey of the canal between Toronto and Georgian Bay. I have worked steadily for the completion of that project ever since, and nothing has gratified me more than to see this great Convention met here to work out this great scheme of deep waterways, which was originated in 1855. To a certain extent I have modified my views with regard to the Georgian Bay Ship Canal. The great expense involved has been the cause of that modification of view. For the last few years I have advocated the construction of a ship railway. I was converted to that project by the late Captain Eads. He projected a ship railway between the Atlantic to the Pacific, across the Isthmus of Tehuantepec; and if he had lived that project, no doubt, would have been carried out, and the Panama or the Nicaragua Canal would not have been heard of as practical works.

Mr. Corthell was Captain Ead's assistant, and most of you have read his pamphlet on the subject of the ship railway, and on the water route by Montreal, and the cost of deepening the canals to the Atlantic. He estimates the cost of securing a depth of 21 feet at $27,000,000. Captain Eads wrote a letter to the effect that this was the most favorable route for a ship railway that he new. The ship railway will only cost half what the canal will cost. There is no reason why large vessels may not be lifted out of the water and carried across the land at the rate of 10 miles an hour without damage. But it does not matter to me whether we have a ship railway or a ship canal; I want to see either one or the other, so that the traffic of the Great West can be accommodated. I believe that the commerce of the Great West will require all the improvements that can be made either by the canal across the Niagara Peninsula or from Georgian Bay to Lake Ontario, or by the Ottawa Ship Canal, or any other way. I am favorable to all these projects and I believe that the Great West can make good use of them all. I may mention, without detaining you too long, that the first canal projected in Canada was the Lachine Canal, which was mentioned in the Constitutional Act of 1791. The work was begun in 1821 and finished in 1825, the very year that the Erie Canal was completed. If the Hon. William Hamilton Merritt had lived till the present day he would have been surprised at the demand of 21-foot navigation from the Great West to the Ocean, he having been satisfied with the Welland Canal for vessels of from 40 to 60 tons. When the Welland Canal was projected it was estimated to cost £800,000. It cost $6,500,000 before it was finished.

The question has been mooted here whether the Americans would assist us in deepening our canals. Why, Hon. John Henry Dunn, who was Receiver-General of the Province, was sent to New York when the Welland Canal was projected, and he got nearly £70,000 in New York to construct the Welland Canal, this being at the time when it was to cost £800,000. You need not be afraid; if commerce demands it, we shall be united in giving it. I do not see how it is possible for governments to interfere with the people's will. The Rideau Canal was commenced in 1829, and the late Sir John Franklin, who lost his life in exploring the

Arctic Regions, laid the corner-stone at Bytown, now the City of Ottawa. The Rideau was built as a military canal.

The construction of the Erie Canal took away the trade from the St. Lawrence route. The book I hold in my hand is a work on the Canadian canals by the celebrated Dr. Kingsford, who is now writing a history of Canada, a very able work. When he was preparing his work on canals, in 1865, he asked me to put my opinions on record with regard to the Georgian Bay Canal. I will make a quotation from what I then wrote :

"Will the enlargement of the Welland and St. Lawrence Canals ensure the division of the Western trade from the Erie Canal to the St. Lawrence? I think not, for the following reasons : Judging by past experience it appears reasonable to suppose that the bulk of the Western trade having passed the St. Clair River and reached the eastern end of Lake Erie will find its way to New York by the Erie Canal. To compare distances, which is after all the most important consideration, apart from the question of lockage, it will be found that New York is 48 miles nearer to Buffalo than Quebec, which is taken to represent tidewater. The following figures demonstrate the distances :

Buffalo to Troy by the Erie Canal	350	miles
Troy to New York by the Hudson River	150	"
Total	500	"
Buffalo or Port Colborne to Port Dalhousie	28	"
Port Dalhousie to Kingston	190	"
Kingston to Montreal	170	"
Montreal to Quebec	160	"
Total	548	"

"At New York the produce of the West has arrived at the Atlantic Ocean, whereas at Quebec the Lower St. Lawrence and the Gulf have to be traversed, a distance of about 800 miles before the Atlantic ocean is reached. The distance from Quebec to Liverpool is, however, 478 miles shorter than from New York, the respective distances being 2,502 miles and 2,980 miles. Deducting 48 miles from 478 miles, the difference in distance from the eastern end of Lake Erie to Liverpool would be 430 miles ; but the high ocean freights consequent on the supposed dangerous navigation of the Lower St. Lawrence, still concentrates the Western trade at New York, and as the St. Lawrence and the Welland Canals have never been filled to their utmost capacity, whilst the Erie Canal is crowded, even after the recent enlargement, the inference is that the enlarged Welland and St. Lawrence Canals would not divert the Western trade. And should there be the slightest probability of such a result the State of New York would immediately enlarge the Erie Canal in the same proportion.

"By the construction of the Georgian Bay Canal 428 miles additional would be saved in distance besides the annual losses on the St. Clair flats, which average about one million of dollars. I consider these advantages would alone divert the

trade, which it is useless to expect can be accomplished under any other circumstances."

I hope to live to see the work commenced, as I have worked in the interests of the project so many years. Whoever lives to see it completed will see the results I have spoken of here. But if the trade once gets into Lake Erie it will go by the Erie Canal to New York. I should not be surprised if the State of New York made a ship canal yet from Buffalo to Albany. Mr. Cooley stated that he wanted to get into Lake Ontario, but afterwards, when he was cross-examined, he said that he wanted to get into Lake Erie. I suppose it does not matter to the Western trade whether the route is by Lake Erie or by Lake Ontario, provided it is the cheapest and best. I believe that the cheapest and best route possible is across Ontario into Lake Ontario. Mr. Corthell, the eminent engineer, of the United States, has proved that clearly. Having such authority, I can only say, that as long as I have breath I will support this line.

Mr. David Blain—Mr. Corthell's paper has been referred to, and I have no hesitation in saying that it is the ablest paper on the question of deep waterways, from the head of the Lakes to tide-water, that has ever been written, either on this side or the other side of the line. I have a copy of it, and I think it would be well, if the Convention approved, to have it printed in the report of our proceedings, as it will give information which members of the Convention would find valuable.

Mr. Nettleton - If Mr. Blain moves that Mr. Corthell's paper be printed, I will second the motion.

Mr. Alan Macdougall—I may say that Mr. Corthell's paper, having been read before the Society of Civil Engineers, the right of publication lies with the Society. No doubt the Society would be glad to give authority for its publication, but I merely state the fact in order that the necessary application may be made.

Mr. Blain—I move that the Society of Engineers be asked to give authority to publish Mr. Corthell's paper.

Mr. Gifford, of the Patrons of Industry, was called upon. He said—I am here simply to watch the acts of the Convention, in order that I might report the same to my constituents.

Reference has frequently been made here to the fact that agriculture is at the basis of all industry in this country, and it has been inferred that by cheapening the cost of transporting agricultural products all classes would be benefited. One consideration seems to predominate, and possibly the idea may strike me differently from the generality of people. The great object seems to be to provide facilities for transporting grain.

Farmers now regard grain as the raw product of their profession. The great object of the more advanced farmers is to concentrate with a view to putting their products in more valuable shape. As all are aware the grain produced in Canada and the adjoining States must face conditions different from those in years gone by. We have to face the competition of all countries in our common market, Great Britain. In view of this, it seems to me that we would have to have a

change in the system of exchanging commodities as it were, not only within our own Dominion, but with the United States, in order to realize the full advantages of a change in the system of carriage such as would be brought about by deepening the waterways. We have had a practical illustration of the effect of exchange of products between this country and Great Britain, which is our market. We applied to the shippers in Montreal to give us a reduction on the rate on cattle to Britain, a matter in which we are much interested. The answer was that if we could so adjust affairs between this country and Great Britain that return cargoes would be secured, one-half of the export rates might be thrown off, but under existing conditions, they could not carry more cheaply than they were doing. Although grain can be produced more cheaply in Manitoba than in Ontario—and this is true also of the Dakotas, Minnesota and other Western States—the people there will find that they must convert their grain into some other form before they can compete with other countries. The most progressive farmers in Ontario are feeding all their grain. I can realize about 80 cents a bushel by feeding pork, which is very much in advance of what can be got for the grain in the market. Our farmers are finding this out and the question is whether there will be sufficient trade to justify us—and this is a question I would like to see dealt with—in spending a large amount of money to carry on improvements the object of which seems to be to carry raw products. Once convince us farmers of that and we have liberality enough to go heartily for any project that is for the advantage of the country. Undoubtedly some things have been brought out in these discussions that are beyond what I expected. For instance, I find it proposed to have a deep water canal from Duluth or West Superior to St. Paul and Minneapolis and thence north to Winnipeg, and deepening the Mississippi southward to enable free passage of vessels drawing 20 feet of water. It seems to me that if that is to be included in the project it will be too large a matter for this Dominion to think of. But if it can be restricted to a more simple scheme, it will commend itself to the farmers more readily. I shall report to my constituents such notes as I have taken of the discussion and perhaps they may see fit to publish them. I shall be able to bring my ideas out more clearly in that way than in these few remarks. I thank you for your kind hearing, I trust you may come to satisfactory conclusions and, in closing, I assure you again that the farmers of the Dominion are liberal enough to support anything which they believe will conduce to the interests of the people of this country as a whole.

Mr. John Brown—I am sure it is a pleasure for us to hear something definite from a representative of those who, more than any other class, make the wealth of the Province of Ontario. What Mr. Gifford says about the necessity of our farmers going out of the business of furnishing raw material for the world's market is quite true. But that does not settle the question. The principle recognized to-day in fixing freight rates is that the rate shall be charged according to the state of manufacture in which the article is. I have here a complete report of everything grown and consumed in the Province of Ontario last year. I could give my friend, Mr. Gifford, the figures showing the saving that would have been effected by cheaper freight rates in his own locality. Ontario is king in one thing —cheese. This Province produces over 93,000,000 pounds of cheese, all or nearly all

of which goes for export. Suppose a line of vessels was started to carry only cheese, and suppose the Ontario product were shipped from Toronto, its natural outport. You will see that we would keep one freight line carrying cheese from the City of Toronto for a whole year.

Improved facilities for transportation would mean a saving of $3,000,000 on the products of the farm exported from the Province of Ontario alone. I base these figures not upon the product of any one year, but taking an average of eleven years. If that is true with regard to this Province alone, our friends will have a standpoint from which to estimate the importance of this question to the immense area in the West which this project will benefit. The saving upon cattle alone for this Province would not be less than $400,000; on hogs there would be a saving of $200,000.

Let me draw attention to another matter which has not yet been considered here. We in this Province have been getting our coal from our friends in the United States. Without going into politics, I may say that it is a well-known fact that we, like the people of the United States, have had to pay just exactly what the coal producers on the other side of the line have chosen to charge. One of the greatest benefits of this scheme for the Ontario farmer and the North-West farmer, as well as to us people in the City, would be its effect in lowering the price of coal. We have immense coal fields in the Maritime Provinces, and, with cheap transport facilities, there can be no doubt that it would be a cold day for the coal ring.

The question has been raised—and a reasonable one it is—have we sufficient incoming freight to induce these steamers to come to our port, as they would not be willing to take a cargo out and return light. Last year the City of Toronto received over $21,000,000 of goods, dutiable and free, as shown by our Customs returns. That is nearly one-sixth of the entire import of the Dominion. I can assure you, Mr. Chairman and our friends, that the distribution of that trade will come here, and it will not be a matter of the far future. We have had many men in Canada who are anxious to serve posterity. I shall be glad of any benefit to posterity that comes from our work, but I am one of those who wish to get their share now.

Mayor Taylor, of Winnipeg, read the following paper prepared by Mr. James Fisher, M.P.P., a delegate for the Farmers' Institute of Manitoba.

OUR INTERNATIONAL WATERWAYS AS THEY AFFECT THE NORTH-WEST.

The Central Farmers' Institute of Manitoba having done me the honor of appointing me as one of their delegates to attend this Convention. It has been a matter of the deepest regret to me that I have been unable to be present to take part in its deliberations on the very momentous questions that are to be brought under consideration. Taking advantage, however, of the invitation of the Committee that I should prepare a paper to be read at the meeting, I have ventured to suggest a few thoughts touching the interest of the people of Manitoba and the North-West, and specially of the farmers who delegated me, in the deepening of the waterways leading from the head of the Lakes to the Atlantic.

No more serious problem faces the farmers of Manitoba to-day than that of transportation, nor is it one of less importance to the settlers of the Canadian North-West Territories and to those of Minnesota and the Dakotas. Situated in the very centre of the vast continent, far removed from the great markets of supply and distribution, the prairie region of the North-West is at a striking disadvantage, in respect of convenience of access to these markets, as compared with other countries and districts that compete with them for the supply of food products. In the case of the Canadian North-West the difficulty is intensified by the circumstance that between it and the seaboard to the east there lies a vast stretch over a thousand miles in width of at present practically unproductive territory, save at a few points. This entire district contributes little to the maintenance of the one line of rail that connects us directly with the Canadian East. The farmers of Manitoba and the Territories have to pay rates, both on the outgoing and incoming freights, sufficient to make up, not only the cost of maintenance and a dividend on the cost of construction, in respect of the portion of the line within their own country, but also in respect of the larger mileage in the unproductive area. And the burden thus laid upon their shoulders is made all the more grievous by reason of the enormous cost of that very portion of the road traversing the country that fails to contribute to either construction or maintenance. Speaking for the farmers of Manitoba it is not too much to say that the public in the Eastern part of the Dominion have scarcely realized the hardship of their position in this respect. The settlers on the prairies of the North-West occupy a country over which a line of rail can be and has been constructed at a cost very much smaller than the cost in any other part of the Dominion. With more favorable grades and with a much lighter snow fall than in most of the other parts of the Dominion it would seem to the ordinary observer that the rates of freight in such a country ought to be much lower than in districts that are less favorably situated in those respects. In other words the conditions of the prairie region are, in themselves, such as should ensure to the settlers rail transportation at unusually low rates. Unhappily for the settlers of the North-West the reverse is really the case; and the rates charged to them are in fact higher than in districts where the greater cost of construction and operation would naturally make it otherwise. This is due, not only to the great distance of the prairie region from the outer markets, but to the circumstance also that they have to bear the burden, in part, of construction and operation in the expensive but unproductive districts. Upon the shoulders of the prairie settlers has thus been placed a double burden. It is not proposed in this paper to contribute one word to a discussion of the question whether the rates charged to the settlers of the North-West are reasonable or otherwise from the standpoint of the railway company. Whether reasonable or not, the settlers feel at all events that they are a most grievous burden upon them, nor have they any hope that in the near future the conditions will be so changed as to bring about a material lessening of the load.

As a result of the position I have described, more than half the price obtained for the grain of the prairie region, in the ultimate market, is taken to pay the one item of transportation; out of the remainder of the price has to be paid the extra cost of incoming freight, so the settler's candle is in these respects made to burn most fiercely at both ends. When grain fetched a good price in the markets the

burden was not so keenly felt, but now that it has reached the present low prices the position is, to say the least, disheartening.

Under these circumstances the farmers of Manitoba are looking about for some means of deliverance from the burden of the rates, and they have been turning their eyes to the great stretches of water that extend from the head of the Lakes to the Atlantic. They are beginning to realize more and more the wonderful extent of those great bodies of water stretching from Belle Isle, at the entrance of the Gulf of St. Lawrence, to the zenith City of Minnesota, at the head of the Lakes, a distance of nearly 2,400 miles, and at least 150 miles longer than the distance across the Atlantic from Belle Isle to Liverpool. They have been taking note of the fact that for this entire distance, with the exception of about 73 miles, we have continuous, unimpeded navigation for seven months out of the twelve, over a highway received as a gift from Heaven itself as joint and common heritage by the two greatest nations on the globe—Great Britain and the United States,—a highway which has cost not one dollar for construction, and which never goes out of repair. The farmers of Manitoba have been giving their earnest attention to the unparalleled advantages offered by this great highway as a means of transporting the commerce of the country. They have been recalling with interest the wonderful development of the traffic carried over these waters in late years. They have been reflecting on the wise counsels that have led both of the great nations interested in them to overcome the obstructions that impeded navigation in the 70 and odd miles referred to, and on the equally wise policy, worthy of such nations, that has ensured by solemn international treaty the use of these improvements on absolutely equal terms to the citizens of both countries, no matter at whose expense they were made. The history of the canal enterprise along this route, and of the development of the traffic thereon, is indeed an interesting one, and its consideration just now by the farmers of Manitoba, in connection with a proposal to further improve the channels, is timely. It was just 60 years ago this summer that the first lake vessel reached the then unpretentious little port of Chicago; it was some years later that the lake traffic extended to the waters of Lake Superior, and it was in the early years of the development of that trade that Henry Clay spoke of the proposal to expend public money on such an enterprise as the Sault Canal as like spending it in constructing a highway to the moon. Yet the little traffic of Lake Superior, that for a number of years was carried over the portage where the canal has since been built by one old horse and a cart, has swelled into the 11 or 12 millions of tons that are now carried yearly through the Sault Channel, without costing one cent to the shipper in the way of canal dues. It seems like a chestnut to remind such a meeting as this that the traffic carried over the Great Lakes, in the seven months they are open, exceeds the outbound and inbound ocean traffic of all the ocean ports of the United States for the whole year, and that it exceeds also the foreign traffic of the great ports of London and Liverpool combined. But the consideration of just such facts as these is leading the farmers of Manitoba to give more earnest thought to the possibility of a further development of the lake and canal traffic.

Our Western farmers have been considering, too, in connection with this question, the remarkable difference between freight rates by water and those charged for rail carriage. To carry their wheat from Brandon to Fort William,

560 miles, they pay 11.40 cents per bushel, and this is a special rate allowed only for the shipping season The standard rate by rail from Winnipeg to Montreal, about 1,400 miles, is, I understand, 27 or 28 cents per bushel. Against this the farmers of Manitoba place in contrast the water rate of 6 to 7 cents per bushel from Duluth to Montreal, about the same distance. They contrast it also with the water rate of 2 to 3 cents per bushel from Chicago to Buffalo, 960 miles, reduced in 1891 to 1.9 cents, and reaching at one time as low a rate as 1 cent per bushel. They compare it with the water rate of 3 to 4 cents per bushel from Duluth to Buffalo, 1,000 miles, and that of 2½ to 3 cents from Buffalo to New York, about 500 miles, by the little horse-power barges of the Erie Canal and the Hudson River, which take about a month for one return trip. Our urban population in the West, too, cannot help contrasting the rate of 89 cents per ton on coal from Port Arthur to Winnipeg, 426 miles, and the rate of $4 per ton on the same product from the Rockies to Winnipeg, 900 miles, with the water rate of 30 to 40 cents per ton from Duluth to Buffalo, 1,000 miles, reduced one year to 29 cents, and reaching at one time as low a rate as 10 cents per ton.

The Western farmers see plainly how it comes that the rates by water are so much lower than those by rail. They recognize that nature's highway is not easily controlled by any monopoly, but that it is open and free to every person who has capital and enterprise enough to place a vessel upon the waters. Indeed, it is a remarkable fact that it has been found utterly impossible for the various companies that own the great lines of vessels plying on the Lakes to form any combination for fixing rates, or even definitely to settle any rates whatever. Especially is this the case in regard to rates on grain. This arises, doubtless, from the fact that more than half the grain carried over the Lakes is taken by "tramp" vessels, whose owners make their own rates and render it utterly impossible to organize a combine.

There are amongst us some who are looking forward hopefully to the day when, under proper regulations and restrictions directed by some high authority, more than one railway company—aye, half-a-dozen companies, if convenient—may run their rolling stock over one line of railway. A sturdy fight was once made in our Province of Manitoba, though without success, to secure such an arrangement over the line coming in from the United States, since operated by the Northern Pacific Company. What an advantage it would be to Eastern Canada, for instance, if all the lines of railway in that country, including the Intercolonial, could be used alike and on equal terms by the two great trunk lines that occupy the country. But we have no hope that in the near future such an advantage can be secured for the public. In the case of the waterways, however, we have it already. The most unpretentious craft that can carry a load of grain is as fee to use the highway as the greatest of the noted liners that float on the waters, and in that respect the waterway is better than half-a-dozen lines of railway, even though they were in active competition with each other.

One need scarcely refer to the fact that an important factor leading to the immense reduction in freight rates in recent years on the Lakes has been the increased size of the lake vessels and the consequently larger loads that they carry. In the history of the development of the lake traffic, nothing is more remarkable

indeed, than the revolution that has quietly taken place through the increased size in vessels. Some of those now on the Lakes carry in one load as much as 125,000 bushels of grain to Buffalo. It costs but little more to carry 125,000 bushels, in a vessel of that capacity, than it does to take 50,000 bushels in a vessel built to carry that quantity. I understand that a carload of wheat takes about 650 bushels; it would take about 16 trains of 20 cars each to carry the load taken by one such vessel. When our St. Lawrence Canals shall have been deepened even to 14 feet one of the "whaleback" steamers with two barges in tow, will, I am told, take in one load from Port Arthur to Montreal, about a quarter of a million bushels without breaking bulk. To take this quantity by rail would require nearly 20 trains of 20 cars each. One of these steamers, with three barges in tow, as I have read somewhere, has already carried about 312,000 bushels in one load to Buffalo. That means a load equal to the capacity of 24 such trains. Many trains, of course, take much more than 20 cars of grain, but often they are less. A writer in a recent magazine says that the average load carried by freight trains in the United States is less than 182 tons. Some of the new vessels on the Upper Lakes with a draught of only 16 feet take in one cargo over 3700 tons, equal to more than 20 such average trains, while the whaleback steamer with her three consorts in tow will in one load, with one staff of hands, with one outfit of steam power, with one set of machinery, with no wear and tear of the track, and with little wear and tear to the vessel, carry through the 14-foot channel to Montreal, when completed, nearly 9500 tons—or more than is carried by 50 of such average freight trains.

The result of this increase of capacity in the vessels, in respect of freight rates, is seen in figures such as these: In 1887 the average rate per ton per mile on the Lakes was 2.3 mills; in 1891 it was 1.3 mills. In 1871 the average rate on wheat by lake and canal from Chicago to New York was over 17 cents a bushel; in 1880 it was 13.13 cents; and in 1891 it was less than 6 cents. In 1880 the average rate by lake from Chicago to Buffalo on wheat was 5.7 cents per bushel; in 1890 it was 1.9 cents. In 1887 the average rate on wheat from Duluth to Buffalo was 6.6 cents per bushel; in 1890 it was 3 cents. In 1887 the average rate on coal from Duluth to Chicago was $1.05 per ton; in 1891 was 56 cents. In 1887 the average rate on coal from Buffalo to Duluth was 70 cents; in 1891 it was 29 cents.

All this is the result of securing a continuous waterway of a depth of 16 or 17 feet, from the head of the Lakes to Buffalo, within recent years, and of the consequent increase in the capacity of the vessels carrying the traffic. What further reduction in rates to Buffalo may we not expect, when, in two years more, we shall have that waterway deepened to 20 feet, and when one of the great vessels that will then be on the Lakes will carry a cargo of 6,000 or 7,000 tons?

But the farmers of Manitoba are especially interested in the proceedings of this Convention because it is called with a view to discuss the feasibility of improving the channel right through to the ocean, so as to give a 20-foot waterway throughout. To the people whose interests I seek to present before the Convention such a scheme would be one of momentous importance. The advantage of the lake and river route can never be fully enjoyed by the settlers in the North-West until we shall have such a channel, so that the largest cargoes on the Upper

Lakes can go through to the seaboard, or if need be to Liverpool, without breaking bulk. But the farmers of Manitoba will, I am sure, make no unreasonable demands upon the Canadian public. I believe they will not expect that Canada, after spending $50,000,000 on these works, will, for the present, at all events, out of her own purse undertake the deepening of the Welland and St. Lawrence Canals to the increased depth suggested. The farmers of the North-West will, I believe, ask no more of the Dominion at present in respect of these channels than that the work of deepening them to 14 feet shall be pushed forward with the utmost possible vigor. If this Convention, by any action it may take, shall be the means of having this work hastened, so as to insure its completion at the very earliest possible moment, it will have done a great deal to help the farmers of Manitoba. I have seen a recent statement from the Department, intimating that it is expected to complete the work by the Spring of 1897. If I mistake not, it was said by the Minister, less than two years ago, that its completion was confidently expected in the Spring of 1896. Let us hope that even the Spring of 1897 will not find it still uncompleted. And is it not possible by a special effort, such as was put forth in the case of the Canadian Sault Canal, to complete it at even an earlier date? Expectations are held out to the people of the West that a very considerable reduction of rates by water will follow the completion of even the 14-foot channel. And if, as we understand, the whalebacks can then carry loads of from 75,000 to 85,000 bushels of grain, making a quarter of million for one steamer and two barges, such expectations ought surely to be realized.

If I interpret aright, the views of the farmers of Manitoba on the question of the deepening of the Welland and St. Lawrence channels to 20 feet—and I have been at some pains to enquire into their views,—I believe they will be found favorable to its being done as an International work. Assuming that the accomplishment of such a work would be an advantage to both countries, it is difficult to understand why it should be done otherwise than at the expense of both nations. For Canada alone to spend another $50,000,000, or possibly more, on a work in which the people of the Northern and North-Western States are at least equally interested, would seem most unreasonable. It may be frankly said at once that under present conditions Canada cannot afford to bear the whole cost. There is evidently a very strong public opinion in the United States in favor of securing a 20-foot waterway from Buffalo to the seaboard, and if our good neighbors make up their minds to have such a highway they will proceed to construct it even if they have to open a new channel entirely through their own country. We have, however, much evidence that there is, as might be expected, a strong opinion amongst the citizens of the United States in favor of improving the Welland and St. Lawrence route in preference to any other. It is recognized, of course, in the first place, that the St. Lawrence route is the natural channel, and the only natural channel leading from the Lakes to the Atlantic. It seems to be conceded that the deepening of the Erie Canal to such a depth is an engineering impossibility. Then it is also the shortest and most convenient route to be had. Upon this question of directness of route, the statement made by Mr. T. C. Keefer, C.E., a number of years ago, is so apt, that though recently re-published, it may bear repetition upon this occasion. Said Mr. Keefer:

"If a thread be stretched upon a globe from any point in the British Channel to Toledo, Ohio, and arranged so as to be upon the shortest line, it will be found that the St. Lawrence does not deviate at any point more than 30 miles from it, connecting in the shortest possible distance with the most capacious, steady and economic mode of communication, the greatest food-consuming country with the greatest food-producing country in the world, inhabited by the parent and offspring of the most favored race of men."

Again, I find Mr. Keefer giving the following figures as to distances: From Chicago to Montreal, via the Welland and St. Lawrence, is 1,261 miles, of which 71 are canal, 185 river, and 1,005 lake—the canals having 54 locks, with a lockage lift of 563 feet. From Chicago to New York, via the Erie Canal, is 1,419 miles, of which 352 are canal, 202 river, and 865 lake—the canals having 72 locks, with a lockage lift of 665 feet.

The advantage of the St. Lawrence route from an engineering point of view is well put by Col. Orlando E. Poe, Chief Engineer of the American Sault Canal, and his statement on this question, though frequently published, is also well worthy of being repeated here. A resolution having been introduced into Congress in 1892 authorizing the President of the United States "to invite negotiations with the Government of Canada to secure the speedy improvement of the Welland and St. Lawrence Canals, so as to make them conform in depth and navigability to the standard adopted by the United States for the waters connecting the Great Lakes," that is 20 feet, the resolution was submitted to Col. Poe for his report. His answer was in these terms: "The Welland and St. Lawrence Canals undoubtedly occupy the most favorable and therefore the best line of water communication between the Lakes and the Ocean. A deep waterway can be opened by their route at less cost than by any other, and there can be no question as to its advantage in an engineering point of view. So far as communication between the Lakes and the countries beyond the Atlantic is concerned every argument favors the proposition of this Bill."

It is interesting to note in connection with this resolution that the Committee on Interstate and Foreign Commerce of Congress made its report declaring that "the Great Lakes furnish a highway for commerce that has no parallel in any other country," and that "the impracticability of deepening or improving the Erie Canal, so as to admit the passage of ocean-going vessels seems to be admitted on all sides."

Is it in any sense an unreasonable proposition that the two nations should unite in the improvement of the water channels that are the joint and common property of both? Certainly the idea of a joint expenditure upon them has been the subject of serious consideration in the past by statesmen on both sides of the line. In the negotiations carried on in 1874 by Sir Edward Thornton and George Brown with the American Government, one of the proposals submitted was "that a joint committee be formed and continued charged with deepening and maintaining in efficient condition the navigation of the St. Clair and Detroit Rivers and Lake St. Clair." It is true the Treaty then proposed fell to the ground, but I have never seen it suggested that any objection was made to the proposition that

the improvement of the waters named should be made by both nations, and it is impossible to conceive that such a proposal would be objected to. On the contrary, if I mistake not, the two nations did actually about that time make an expenditure to improve the navigation on the Detroit River. Were it possible by rock cutting or otherwise to remove the obstruction in the Niagara River, that stands there in the shape of the great cataract, would it be considered reasonable that one alone of the two countries should undertake the entire work? Surely no one would argue for a moment in that way. And if, because of the character of the obstruction, it has become necessary to divert the joint and common water-course through the land upon one side of it, is it less reasonable that the two nations should join in doing it?

Is the fact that the canal has to be made through the territory of one country a reason why the other should not join in its construction? I cannot understand why it should be so, so long as the canal is but a diverting of the joint and common highway to avoid a natural obstruction that stands in its path. If such a reason be indeed a good one, it would be conclusive against Great Britain or the United States spending money upon any canal in a foreign country, no matter how advantageous to either or both the countries. But such considerations have not prevented both these nations from interesting themselves in the Nicaragua Canal. If I mistake not the United States, out of the Federal purse, has paid the cost of a survey. If that canal is to be completed, it is well understood that it must be done by either British or American capital. The Governments of both countries, recognizing this, have taken care to protect that capital as well as the undertaking itself. It is interesting at this time to recall some of the provisions of the Clayton-Bulwer Treaty of 1850 entered into between Great Britain and the United States, in respect of this canal. That treaty in terms declared that its design was the "constructing and maintaining of said canal as a ship communication for the benefit of mankind on equal terms to all, and of protecting the same." It was provided that "vessels of the United States or Great Britain traversing the canal shall in the case of war between the contracting parties be exempted from blockade, detention or capture by either of the belligerents," and this protection was extended for a distance beyond both ends of the canal. The two nations further undertook by this treaty to "guarantee the neutrality of the canal so that it may forever be open and free and the capital invested therein secure." They further contracted that they engaged "to invite every other state with which either of them had friendly intercourse to enter into similar relations to the end that all such states might share in the honor and advantage of having contributed to such a work." And the treaty went on to declare that they "not only desired to accomplish a particular object, but also to establish a principle, and they hereby agree to extend their protection by treaty stipulations to any other practicable communication whether by rail or canal across the isthmus."

Is it reasonable to imagine that these two nations can unite in a scheme for constructing, maintaining and protecting, even in the event of a war between themselves, such a work as the Nicaragua Canal in a foreign land, and that they cannot enter into a friendly arrangement for improving the channels lying between the two countries themselves, over which so much of the commerce of both countries

is carried? Can Great Britain and the United States, in short, enter into such an arrangement to provide a ship canal "for the benefit of mankind" on a foreign soil, and yet be prevented from joining in providing such a channel on the boundary-line between their own lands?

Surely there can be but one answer to the whole question, and that is, that the two nations ought to join in this great work, if it be indeed of such advantage to them both, as we all believe it to be. Surely it may be left to the good sense of the two Governments to make such provision for the maintenance, control and operation of the joint work as would secure its being always free to carry the commerce of both nations.

The farmers of Manitoba will, I believe, rejoice if this Convention can throw its influence in favor of such a work being undertaken as an international one. But the people of the West are still a long distance beyond the head of the Lakes, and one of the most serious phases of the question of transportation for them is the cost of carrying their produce over that distance. They have a hope that in the near future it may be found possible to open water communication between the Red River and Lake Superior. The same question is now a living one in Minnesota and the Dakotas, and the people of those States are enquiring into the feasibility of opening a channel from the head waters of the Mississippi to Duluth. The people of the Canadian West do not now call upon the Government to open such a channel. Sufficient information has not yet been obtained to justify us in saying that such a scheme is feasible. It is known, however, that some of the conditions are extremely favorable. There is practically water communication now, though of very little depth, from the Lake of the Woods to the Red River, across the prairie region. The alluvial character of the prairie soil is such as to make the opening of a ditch a matter of comparatively small cost. Between the Lake of the Woods and Lake Superior there is almost a continuous waterway. The opening of a complete channel in that district would no doubt be attended with a very great cost. While it would be unreasonable, with the information in our hands, to advocate at this time the opening of such a channel either easterly or westerly from the Lake of the Woods, the farmers of Manitoba having intimated, by a resolution of the Farmers' Institute, that they think the Government of Canada should at all events go to the expense of having a survey made with a view to considering the feasibility and cost of constructing such a channel. It will be a great help to them should this Convention join them in urging this much at least upon the attention of the Government.

JAMES FISHER, M.P.P.,
Manitoba.

Mayor Taylor—At this hour I shall not detain you with any lengthened remarks of my own. It would seem that since this Convention was opened one of the great difficulties in the way of this scheme of deep waterways has been removed. The statement has been freely circulated in Manitoba, and has been given on the authority of a leading article in one of our newspapers, that this work would cost somewhere in the neighborhood of $150,000,000. But when I had a conversation with Mr. Fisher I found that he had reached the conclusion that it would cost $50,000,000, and it was with that idea that I came here. There is no

doubt that it will be an advantage to have the canals deepened to 14 feet, but it would be much better to have 20 feet or even more, as it has been clearly shown that the larger the vessel the cheaper the freight. Even if this great project goes on it need not interfere with any other scheme for reaching the markets of the world. I believe that Manitoba, Minnesota, the Dakotas and the whole Western country will, in the course of time, and that no very distant time, produce more than you will be able to bring down through the Lakes. It will be necessary for that country to reach its natural harbor and that harbor I consider to be Hudson's Bay. I have heard some strange remarks with reference to the Hudson's Bay route since coming here. Still you will hardly find a resident of Manitoba to-day who has not the greatest faith in the Hudson's Bay route as the means of reaching the consuming market.

The Chairman—We have here two members of the Dominion Legislature, who are sworn friends of deep waterways, I refer to the Hon. John Ferguson, Dominion Senator; and Mr. Emerson Coatsworth, jr., M.P. for East Toronto. We should be glad to hear from these gentlemen.

Hon. John Ferguson—It would be inexcusable to detain you with a long speech at this late hour, but there are one or two observations I should like to make. First, there is no difference of opinion, so far as as I can learn, as to the desirability of deep waterways from the Upper Lakes to the Atlantic. The only difficulty is to convince the public as to the right way to accomplish the object in view. We in Canada have been progressing rapidly and doing so much in the way of building canals within the last two decades that it would be impossible for us as a people, and through our Government, to undertake so large a work or with our present revenue, even to contribute any considerable sum towards it. But, if the ways and means can be provided—and I think the attention of the Convention ought to be drawn more to that subject—we could probably agree upon a plan to be followed. I was much edified by Mr. Cooley's address. But in that address he said that when you got to Montreal you were nowhere. So far as the produce of the farm is concerned—and to cheapen the freight on that produce is the main object in deepening the canals—when you get to Montreal you are in exactly the right spot, far better off than if you were at New York, and I will tell you my reasons for thinking so. You know that the difficulty in transporting meats, eggs, cheese and nearly everything the farm produces, is the warm water of the Gulf Stream. The water through which you have to travel most of the way from New York to Liverpool is 70 to 75 degrees, and runs as high as 80 and even 85 degrees. From Montreal you go through water at 40 degrees. Your produce of every kind reaches the markets of Europe in better condition and therefore commands a higher price. Navigation from Montreal is open seven months in the year. The difficulties of navigation in the St. Lawrence are sometimes spoken of, but we need hardly discuss them. Now, that we have our lighthouses and buoys everywhere, a vessel can speed as rapidly from Quebec or Montreal as from New York.

You are as near the market of Europe at Montreal as at New York, and much nearer the Western country from which the bulk of the products come. When my friend Mayor Taylor spoke of the Hudson's Bay route I was glad to hear him,

for I entirely sympathize with him. The future of the whole North-West is unquestionable by Hudson's Bay. I have given this subject a great deal of study, and have called attention to it through the Senate. For 274 years that route has been navigated by small and very inferior craft, and that practically without loss. We have at Fort Churchill one of the finest harbors on the Atlantic coast; and let me tell you Hudson's Bay never freezes, Hudson's Strait never freezes.

It is the opinion of the best navigators that this route is navigable the whole year round, but unquestionably it is navigable from four to six months. The only time when it is dangerous is when the ice from Fox's Channel floats down in April, May and June. With proper vessels constructed for the trade, the products of the great North-West will ultimately go to Hudson's Strait. I believe that the products of Minnesota and the Dakotas will also go down that way. Fort Churchill lies three degrees west of St. Paul, it is within 700 miles of Regina, within 950 miles of Calgary, within less than 900 miles of Edmonton, at the base of the Rocky Mountains. At Fort Churchill you are as near Liverpool as at New York. The products of that great country will not in the future be brought to New York for shipment, when they have an ocean port so near. But there is plenty of territory to be benefited by the deep waterway. Therefore, I say, Go on; the work you have undertaken is necessary and will be of incalculable benefit. It may be thought that I am in the wrong place to talk in favor of the Hudson's Bay route, but a public man's constituency is as broad as his country; and if he does not think so, he is not fit to sit in the Parliament of his country.

This is not a local question, and I am not addressing a local convention, but a convention representing the whole Continent. I am entirely in sympathy with the project of deep waterways, and so far as I can assist in urging the project forward, consistently with due consideration for the finances of the country I live in, I shall be glad to lend my aid.

Mr. Coatsworth, M.P.—Without detaining you at this late hour, I may say that in the discussion of this subject in Parliament last session, the difficulties spoken of as standing in the way of carrying out the scheme were, in the first place, the great expense involved in dredging and blasting out the channel of the St. Lawrence, and deepening and lengthening and widening the canals; and in the second place—a point that I have not heard raised here,—that even if the channel were deepened and widened, the class of vessels used in lake navigation are not such as cross the ocean, and therefore there would have to be transhipment, as there is to-day, in order to cross the ocean. I have no doubt that that would remedy itself, and, so far as I am concerned, I am entirely in favor of deep waterways for this country, so as to give easy access from Upper Lake ports to Montreal and Quebec and so to European ports. We must look to the future as well as to the present. The policy of deepening the canals and the St. Lawrence to 14 feet is now 20 years old. Twenty years ago this country issued a commission, which commission reported in favor of deepening the canals to 12 feet. But shortly after it was found that this was not sufficient, and a depth of 14 feet was decided upon. That has not yet been completed, and now the Government has practically committed itself to a 20-foot channel by making that depth in the Sault Canal. And so the probability is that if we are too modest in our ideas to-day we shall find

those ideas behind the age before they are carried into effect. I have every confidence in the development of the country, and I feel that that development can be greatly assisted by carrying out the deep waterways project. Whatever may be the result of this Convention immediately, the ultimate result cannot but be favorable. As a citizen of Toronto, I think that we are deeply indebted to Alderman Thompson, who has done so much in bringing this Convention together, and in bringing before the public this deep waterways project. I feel sure that at no distant date we shall see the policy of this country favorable, not to a 14-foot canal system, but to one of 20 or 25 feet.

Mr. McIntyre—There are two points in Mr. Fisher's paper which should not be lost sight of—first, the information he brought out in regard to pressing forward the deepening of the canals to 14 feet; and second, the able manner in which he handled the international phase of the question. It seems to me that there is material in the paper which the Committee on Resolutions should take hold of, and I would move that that pape be referred to the Committee on Resolutions.

The motion was seconded, and carried unanimously.

The Convention adjourned until 10 o'clock the following morning.

WEDNESDAY, SEPTEMBER 19TH—MORNING SESSION.

The Convention re-assembled at 10 o'clock.

Mr. John Brown read the following paper

ON ORGANIZATION.

Mr. President and Gentlemen: When the Chairman of the Deep Waterways Committee allotted to me the task of presenting a scheme for the organization of the territory to be beneficially affected by the proposed improvement he certainly did not appreciate the magnitude of the undertaking nor the lack of capacity and experience of the one chosen to perform it.

In order to have an effective organization it is necessary that we should take into consideration the difficulties and the opposition to be overcome before success can reward our efforts. For over 50 years the City of New York has taken tribute from the West, which annually has sent millions of dollars to swell the coffers of the Vanderbilts, the Goulds and the other multi-millionaires who control all the railways which, centreing from the East at Buffalo and Chicago, have carried the great bulk of the produce of Western toil and enterprise to New York for distribution. That these gentlemen, backed up by an army of the lesser magnates in the shape of the brokers and middlemen, will offer the bitterest kind of opposition is assured by the recent action of the New York Produce Exchange. That they will spend millions to retain their control over the West there can be no reason to doubt, for it is certain that the making of Chicago, Duluth, Detroit, Cleveland, Toronto, Rochester and in fact every city on the Lakes practically seaboard ports will not in the least assist the trade monopoly of New York.

On the Canadian side the railway companies, forgetting the experience of the roads in the United States which are paralleled by waterways, seem to have determined to offer what opposition they can. Why they should do so is a puzzle, for in every case where, by reason of the improved facilities for the transporation of heavy freight by water, trade has been stimulated and built up, the railways have been benefited in proportion. No better example of the fact offers than in the case of the Erie Canal and the railways which parallel it for 370 miles and which are the most prosperous on the continent to-day. Fortunately for the future, the people of this country are beginning to realize the evils of railway domination and are prepared to shake off the yoke and take advantage of their God-given opportunities. Probably that which will offer the most difficulty to overcome will be the vast territory which it will be necessary to cover if we aim at a thorough organization. Few even of those who have been actively promoting our object for years have any very definite conception of the ground to be covered by our Association. Seated where you are, Mr. President, you are less than 50 miles further from Liverpool than is the City of New York, and if you were to

draw a straight line from here to New Orleans you would find it 200 miles shorter than a similar one drawn from New York, and hence we may safely say that all that district north and west of a line from here to New Orleans is nearer to the world's market by way of the Great Lakes than by any other known route. It is not to be thought that it is intended to attempt to organize two-thirds of the Continent, but it is necessary that we interest the twenty-six millions of people which the Government of the United States declares are directly tributary to the Lakes and the three and a-half millions of Canadians who will be directly benefited. In order to reach the people it is necessary that our Association should have a branch in each State and Province which shall have charge of the advancement of our cause The greatest obstacle in our way is the indifference of a large portion of the wealthy and influential classes of the people who have become, as the Psalmist puts it, "enclosed in their own fat," but it is suprising how this class will bestir themselves when financial trouble meets them, and the recent financial depression will no doubt act as a powerful ally and assist us in our aims. The best means of overcoming the indifference of the people is the press, which should be kept posted on all vantage points by our friends.

But by all means the greatest bar to our success has been that hitherto we have been absolutely without any form of thorough and systematic organization. We have been carrying on a sort of guerilla warfare against an enemy entrenched behind a barrier of wealth, of selfishness and of indifference. Our Association must be as wide as its object and be established upon an International basis wide enough to allow the Nova Scotian and New Brunswicker to meet in amity and community of interest with the Dakotans and even the wild men from Minnesota.

Before this Convention closes we shall have a platform broad enough to hold the half-million of business men together with the twenty-five millions of toilers whose labor produces the wealth which, in the form of merchandise, seeks the shortest, broadest and cheapest roads to the markets of the world. The manufacturers and the artizans of the Eastern and New England States, who consume the vast amount of the Western produce which annually finds its way to the domestic market, must be made to understand that their interests are to be conserved and not imperilled by the improved transportation facilities. One of the first duties of our Association, no doubt, will be to make a plain and distinct statement as to effect of our proposals upon the industrial classes in the Eastern States, and Provincial associations should be formed at once, whose duty it should be to see that every Board of Trade, Chamber of Commerce, Business Men's Club, Agricultural Association, Labor Union and Guild is in active sympathy with our object. It is absolutely necessary to success that every Governor, Senator, Congressman, and Member of Parliament should be seen personally, and such pressure brought to bear as will make him willingly or unwillingly forward this great work. In all cases the officers of the State and Provincial Associations should be chosen for their capacity, knowledge and willingness to devote time and energy to the advancement of the cause. Honorary officers may be appointed if it is thought anything can be attained by doing so, but it should always be thoroughly understood that the executive offices must not be given as an honor, but as a trust. What I have said with regard to the officers of State Associations is equally applic-

able to the selection and duties of the Executive Board of the International Association. It is not desirable that this Board should be very large, as it will be necessary that they be called together from time to time as necessity may arise, and it would entail great expense upon the Association without, I think, commensurate benefit to the cause. Where there are few to elect there is not the slightest doubt that they will be chosen with the greater care, and the gentlemen upon whom your choice will fall will undoubtedly have a greater appreciation of the trust. No organization can be strong or effective where the members are not absolutely loyal to their whole platform. All of us cannot have a front seat in the wagon, we cannot all get our particular pet fads given the prominence which we want, so we must therefore determine that the only road to ultimate success lies along the line of complete union to forward the great main aim of this Convention. Choosing officers does not relieve a single member of this Association of the responsibility which rests upon him to do all in his power personally to continue the agitation which has received new life and vigor at our meeting here. Friends, your are here from almost every section of the north half of the Continent, and it is doubtful if a thorough canvass would find a single delegate who is not connected with some business association whose influence would not be of value to this cause. Let us all remember that a year or two of organized work crowned with success is better than ending in failure.

It has been said that a resolution is of no service unless you put legs to it. We want our resolutions to travel and for that purpose a strong and efficient organization is necessary to successfully crown our efforts, not in ten years, but within the next five.

Mr. E. V. Smalley—One thing occurs to me in connection with the matter of organization and that is that the Committee should make an early provision for the holding of another Convention in the American North-West. The members of this Convention are of course fully alive to the fact that the first step in the carrying out of this movement must be to make a strong demonstration upon the Congress of our United States and that demonstration must be organized primarily in the American North-West. If we can establish there a strong and growing organization it will soon spread beyond the wheat belt to the corn belt and so the people of our corn-growing States when they get nearer to our water system than they are, will participate in the great movement for securing cheaper traffic and for getting to the sea. We shall in this way bring in Iowa, Nebraska and Kansas. When we go to Washington with the whole of the Mississippi Valley solid for a 20-foot channel to the sea we shall be in a position of such commanding strength that in spite of the jealousies that will grow up on the Atlantic seaboard, and in spite of the indifference of the South we shall be able to make such conditions with other interests as will give us a substantial start towards extending our 20-foot channel beyond Lake Erie in the direction of the sea. When it comes to a practical movement and we are prepared to construct a 20-foot channel between Lake Erie and Ontario I think we shall then enlist their strong sentiment in favor of aiding the Canadian Government to deepen the St. Lawrence Channel to 20 feet. National feelings must be carefully dealt with. It is our duty in equity as well as in self-interest to contribute towards the deepening of the channel down the St. Lawrence River.

Mr. D. Blain—I would like to ask what is to be the extent of the powers of this Convention. I do not think it should be limited to the waterways, but should take into consideration the best, quickest, safest mode of transferring freights from the centre of this Continent to the seaboard.

Mr. Thompson—I can hardly answer that question. I may say the matter has been referred to the Committee on Resolutions, and whatever resolution they introduce will intimate the scope they propose to give to the permanent organization.

Mr. Smalley—I am somewhat in touch with railway matters, and I can safely say that we have got to the low water-mark in freight rates. We have gone beyond the safety-line in the intense competition of our roads, and we must not look for relief to any further reduction in general railway freights on long-distance hauls. We have to look altogether to relief by better water systems in the future.

Mr. Steele—I saw in one of the morning papers what I thought was a good suggestion to us, namely, that before these canals are built, the minds of a great many people will have to be broadened. I think that is the keynote for us. Senator Ferguson has stated that the matter has been pretty well thrashed out, that we were all unanimously in favor of going on with the work, and that now we must arrange the finances. Well, the financing of such a work is a very heavy undertaking. The Government of the country will only move when it knows it has a majority of the people behind it. I think we have made a mistake in being somewhat too narrow. At an earlier stage of the meeting I made a few remarks about the character of the interests involved. The interests involved are those of the whole people of this country.

Competition in the markets of the world is going to become fiercer. In the *London World* I see a statement that samples of wheat had been shown on the London Corn Exchange from Northern Siberia, where there existed tracts of arable land larger than the whole of the arable land of North America. These samples were similar to our hard Manitoba and Minnesota wheat. The captain of one vessel said for the past sixteen years he had sailed from London to Siberia, down the River Yenisei into this northern region. By a limited expenditure Northern Siberia could be opened up for upwards of a couple of thousand miles, extending to the borders of Turkestan. There is a great deal of country not yet heard from which will send produce into the market before many years.

In regard to broadening our ideas, we had a capital address from Mr. Gifford, who represents the farmers. I think his address gave us the key to their ideas in so far as it affects the Province of Ontario. Mr. Gifford told us that their idea was that instead of shipping wheat, they were going to ship it in a condensed form, such as live stock, dairy produce, etc., just as other nations of the earth were doing. Australia is sending butter and cheese to London. Their Governments are bonusing every pound of butter and cheese that will bring more than a certain price.

I do not think anything has been made of the enormous volume of traffic that is going inwards as well as outwards on this Continent. The *Winnipeg Commercial* had an article on "What is the matter with the trade of the country?" The writer of this article took the staple articles of this country that are imported.

In Brandon granulated sugar sold at 16 pounds for the dollar; in Winnipeg it was 18 pounds. At the same time in Toronto 22 pounds were sold for the dollar. It took from 4 to 6 pounds to convey a dollar's worth of sugar from Toronto to these points. That is an illustration of very many things they use in everyday life. Hardware, wire-fencing, and everything of that kind. There is no interest you can name that does not depend upon agriculture as a basis for its prosperity.

I am surprised that the people of Montreal cannot see that their interests are to be served by furthering the objects of this Convention, and assisting in the work of getting a deep waterway. I can understand why the people of Buffalo might resist it; but I am at a loss to see why New York and the New England States refuse to aid this movement. On the New England coast they have an industrial population of about 15 million people who have to be fed. Their manufacturers have to compete with the manufacturers of the world. If they are to compete successfully, surely their policy ought to be to make such arrangements as will bring food as cheaply as possible to their working people. It is competition right straight along the line, and the people who do not recognize this are those who are going to be left behind in the race. I hope the voice of this Convention will reach the whole Continent of North America, that there will be no class in the community that will feel they have no interest in it. A prominent forwarder of the West has been quoted as saying that if you gave him a certain depth of water, he would cut the rates from Buffalo to Duluth in two. He has more than fulfilled his promise, although he has not had that depth of water. The same thing will happen with a 20-foot channel through to the Ocean. Taking the average water rate from Duluth or Port Arthur to Liverpool, it costs about 10 cents per bushel. Now, I feel confident that with a 20-foot channel we could cut that rate in two, and be able to send to Liverpool for just half the money. I am sure it is no exaggeration to say that with these rates cut in two within the next ten years, the saving effected to the people of the United States and Canada would be equal to the national debt of both countries, and leave a handsome surplus in the treasury besides. (Applause.)

THE NECESSITY FOR A DEEP WATERWAY.

Hon. Denison B. Smith, Secretary Toledo Board of Trade,—The topic is one that from the beginning I have taken a very great interest in, and that interest increases as the years fly past me. My paper will be brief; it is in a measure a statement showing the absolute necessity for this great waterway to the sea, and in a measure a presentation of reasons of a financial character showing why it will be profitable to undertake this work for those who are engaged in commerce.

Toledo is the point of concentration for the winter wheat from the South-West and South. We have received at Toledo 48 millions of grain in the past year. Toledo is interested in this great question, and her interest in it is signalized by the fact that any increase or decrease in the cost of transportation to the great markets of the world increases or decreases her commerce. We believe, on the completion of this work, the reduction in freights will have an important bearing in the transportation of the surplus produce of the country tributary to Toledo.

As freight rates decrease, so will the commerce of our city increase, and therefore Toledo has been conspicuous in her advocacy of this measure.

I am a born New Englander; of the strictest sect, a Puritan. But a life of nearly 60 years in the State of Ohio has softened, if not obliterated, the lines of conflict and intolerance that marked the character of my progenitors. A strong self-assertion was a living trait of those people, but that is a great moral force, and wherever the Yankee has pitched his tent in the wild and wooley West his coming has been marked by order, education, frugality, enterprise, prosperity, and bright and happy homes. These traits, including, as I said, a high order of self esteem, were honestly derived. They were an inheritance from a race devoted to the best and highest pursuits of life. I am addressing a people to-day who are participants in the same glorious legacy. In North America, says Mr. Strong now for the first time in the record of history, the greatest race occupies the greatest home. This future home of this great Anglo-Saxon race is twice as large as all Europe and is capable of sustaining the present population of the globe. Such a country, with its future overwhelming numbers, homogeneous in their civilization, its resources fully developed, are thrice fitted to control the world's future. It is the representatives of such a people who have called this Convention.

If we are not brethren, we ought to be. A common interest, unrestricted trade and a common destiny ought to mark and control our politics. I am in favor of free trade relations between the two countries. I do not know, and never did know, why Ohio should not trade with Canada and Canada with Ohio, as we do with Pennsylvania and New York. I have steadily maintained this position since the Union Commercial Convention at Detroit in the sixties. It is commonly responded that Canada would obtain the advantage in open trade relations more than corresponding to the gain in the States, but under the influence of this English, Canadian, and New England spirit of self-esteem, I am prompted to say I should be ashamed of my people if they could not hoe a row with you all day, and all the years. Of course reciprocal trade between Canada and the United States must be based on a parity of trade relations with other countries. I am happy to say that we have recently approached a closer approximation to these friendly trade conditions and they are good indications of the fruition of my hopes. I greet this Convention as a possible harbinger of closer commercial ties.

But there are some points bearing upon the objects of this Convention which demand attention and should be discussed at the threshold of our proceedings. Let us be frank. The prevailing sentiment in the States is that Canada has not treated their commerce fairly. You know all about it as well as I. That is a narrow and unfriendly policy in the management of great public works like yours that discriminates against vessels of other nationalities. If this unloving feature is to be continued as a regulating policy in the future, you will not only defeat the full success of your great enterprise, but finally incite the commercial people of the States to the construction of a competing route. If your proposition is to open a water route for large vessels from the Lakes to the sea, to include only Canadian vessels the invitation to the Exchanges on the other side to send delegates here was a mistake. If, on the other hand, you propose to adopt a broad and comprehensive policy, that will include and invite the greatest internal com-

merce on earth to seek an outlet to the ocean through your Dominion, on terms corresponding in all respects to the advantages of your own ships, such a policy, while it may not aid you in building your great work, will certainly aid you in supporting it.

I am a loyal citizen of the United States. Of course I should prefer to see my own country engage in constructing a deep waterway from Lake Erie to the Hudson River. It is most natural that I desire to strongly emphasize this point. I have attended conventions, the object of which was to induce our Government to survey the two routes that have been under discussion. I see no indication of immediate action, and perhaps our Government will be quite satisfied to see the completion of the great canal system you so long since began. I hope we are discussing the completion of a great Canadian work that shall be International in its character and management, inviting the commerce of the world to a participation of its facilities, on terms liberal and uniform. Except in pride of ownership and financial results, commerce would be indifferent of ownership. The ships of all the world passing through the Suez Canal do not stop to challenge its ownership.

The necessity for a channel of communication between the Great Lakes and the oceans of the world is growing with the years, and it is inexpressibly interesting to a veteran who once knew the Lakes as almost a waste of waters, whose limited traffic was confined to Lake Erie, and was represented by the emigrants' furniture, and supplies for a few Western merchants; when Ohio was a frontier Western State; when the maximum sail vessel tonnage was 100 tons. To compare all these conditions with the present results of a matchless growth is, I say, a never-ending source of gratification. No man, living or dead, has ever witnessed so great an expansion of commerce in such a period. The waters of all the Lakes are now plowed by the finest freight steamers. The evolution is from 100 to 5,500 tons; and what can more fitly illustrate a far-reaching commercial statesmanship than an outlet to the Sea of such a commerce? We have no time to-day for expressions of the fancy, but as no human vision of sixty years since could have penetrated and measured this great growth in population, agriculture, mining and commerce, so whose prophetic vision can forecast the future of even twenty years?

I have spoken of the necessity of such a work as we are considering to-day, by either the United States or of this Dominion. Every year sharpens the contest between this Continent and other exporting States for supplying the importing States with bread and meat. The cost to the consumer is the key to the victory. As railway facilities for reaching the sea coast abroad are increased, in like ratio is the growth of the cereals and their movement thence for exportation also increased. In the year ending August 1st, 1894, Russia exported a little more than 100,000,000 bushels of wheat, besides corn, oats and barley. It does not require a very diligent student of Russian affairs to give the impression of her great plans of development, and that but few years will pass before this export movement will be greatly multiplied. Under twenty-five per cent. advance in price India exported 55,000,000 bushels of wheat in 1891, and with better markets than at present she could now increase it.

Nothing is more interesting or remarkable in this line than the rapid increase in the production of wheat and corn in the Argentine Republic in the past two

years. Liverpool authorities estimate her power of exportation from the next winter harvest at 80,000,000 bushels of wheat alone. I quote these three countries as future leading exporting competitors in grain, and the latter in meat supplies. They certainly present formidable future possibilities.

The agricultural resources of the United States and Canada are well-nigh unlimited. A recent compilation gives to the former 535,000,000 acres of land that may become productive by irrigation. On your side the productive area is equally vast, or more so. To reduce the cost of reaching the markets of the Old World is not only to add to the value of our present producing domain, but every one cent per bushel thus saved expands this producing area into new fields, and where agriculture is supported, there follows the merchant, and trade, and manufacturing, and commerce. To aid in perfecting free water communications, cheapening the cost of transport, and enhancing the value of agricultural production lands, etc., is the exercise of the highest function of a Government. What may we expect in this line from a 20-foot waterway from the Lakes to the Atlantic Ocean? We have steamships that could carry 5,000 tons in such a depth, which equals 166,000 bushels of wheat. Such steamers are now transporting coal from Buffalo and Toledo to the Upper Lakes at 50 cents a net ton and transporting iron ore from Upper Lake points at an average, from all points, of 65 cents a ton. The average round trip occupies two weeks and the earnings are $1.15 cents per ton. Taking a lower tonnage of 4000 tons and a ship earns in two weeks $4,600. Four thousand tons of wheat equals a little more than 133,000 bushels. A trip to Liverpool, giving the ship two weeks, with 133,000 bushels of wheat at a corresponding freight and the earnings would equal a little less than 3½ cents a bushel. At the greatly reduced cost of delivery of heavy merchandise at the lake ports by saving the inland transportation by rail or canal from the sea coast, the homeward bound trip might be as gainful as the outward bound.

The point is sometimes urged against a direct exportation from the Lakes to the old markets abroad, that our ships are not staunchly built and equipped for a sea voyage, and that a transfer at Montreal or New York is better. I can see no force in the position. When the time arrives that an outlet to the Ocean can be counted on with surety, our ships will be built with the necessary feature of strength and the additional fuel capacity required for the trip. Again, after allowing for coal the cargoes of these vessels would equal the average shipments out of New York or Montreal. If my freight estimates are considered too rose-colored for the commencement of the traffic, I am sure time will effect a close approximation to them.

In years of large excess in exportation, as in 1891, the ocean freight on wheat from New York to Livetpool advanced to 12 cents per bushel, while the Lake and Erie Canal freight was 8¾ cents, including Buffalo transfer charges. The year 1894 has been a year of low freights to September 1st., with present advancing tendency.

I feel justified in my estimates by the fact that the average freight rate on wheat from San Francisco to London is 26 cents per bushel. The average cargo is under 70,000 bushels. The average trip out, is four months, which is eight times greater than I have given steamers from the Lakes. Eight in 26 gives 3¼ cents

per bushel, as a parity with our ocean trip. If the fuel is an added cost, the additional cargo is more than a compensation. But even at an increase on my figures, it is too obvious for dispute that the great supplies of food on both sides of the line must reach the consuming markets of the world by means of such direct exportation. That will be the solution of the problem. I am quite as sure, that on this low basis of freight, especially when the business is systemized and foreign freights can be secured for the return voyage, that the commerce will prove profitable to those engaged in it.

With only quiet and sober expectations of the growth of the great West on both sides of the border, this project presents the grandest possibilities, but with one more touch upon its far reaching effects, I must close. The tea and other commerce of the Orient will reach at Toledo rapid steam transportation to London at a saving of 750 miles of rail transportation from Toledo to New York.

The great achievement of opening the commerce of the Lakes to the oceans of the world, is in the direct line of developing the resources of this continent. It is an era of great conceptions and unequalled energy in execution, and in my judgement, this project is the leading culminating enterprise of the age.

I hope we are all discussing the completion of a great work that shall be International in its character and management, inviting the commerce of the world to a participation of its facilities on terms liberal and uniform. Except in pride of ownership and financial results commerce would be indifferent of ownership.

Mr. McIntyre—We have all listened with great pleasure to Mr. Smith's paper. Speaking as a Canadian, I think that the Canadians will be ready to adopt the comprehensive policy outlined by Mr. Smith, provided they will not be called upon to bear more than their fair share of the expense. I think we are all united as to the economy of the deep waterway. Our friends are willing to assist us in the work of deepening the St. Lawrence Canal, and for that reason some privilege should be granted them. If we have our waterway deepened to Montreal, they should have theirs deepened to New York. It seems to me there will be no difficulty in that. The management of the canal system must be International in its character. I have had experience in sailing from Duluth to Halifax; I commenced in 1867, in a lake steamer. We experienced difficulty in changing from fresh water to salt water. Now there is so much improvement in the modern engine, that there is no difficulty in the way of a lake steamer going from Dulute to any place in the world. Vessels that are able to stand the storms of Superior and Huron are able to cross the Atlantic. A question that will arise under the new condition is, How are we to get freight for the return voyage from Liverpool to the Lakes? In my opinion the tariff will have to be lowered. If we desire to get the full benefit of our enlarged water facilities, we must have freer trade, not only between ourselves, but with the whole world.

Mr. W. I. Mackenzie—I had very much pleasure in being asked to participate in the preliminary work of the Citizens' Committee, out of which the Convention has grown. I take upon myself to represent the working people of this City, in the first place, and of the whole of Canada, in the next place. I should like this movement to start with the working people and the laboring classes of the United

States and Canada together. It is their question; it is the question of the man with the pick and shovel in his hand. I do not intend to make a speech further than to say this, that if we have the co-operation of the working people of Canada, and of the small traders and farmers, the question will be settled in a very short time. It need not take a quarter of a lifetime to get this thing accomplished. The greatest project that has been brought forward before any country during recent times is the one under contemplation by this Convention, that is to say, the construction of a waterway from all the ports of the world right into the bosom of North America.

COL. DAVIDSON'S PAPER.

Col. James H. Davidson, St. Paul—I fear, sirs, that some of us are taking too narrow and circumscribed a view of the objects and purposes of this Convention and its results. If it means anything, it means something greater and grander than benefits to be contained within the boundaries of a few petty States or Provinces. At St. Paul, in 1883, we discussed or considered the effects of reciprocity and more liberal trade relations, and we talk here of deeper waterways, chiefly, as they may promote the interests of the communities which we temporarily represent. We have permitted somewhat the closeness of the view to limit our vision and circumscribe the field of our discussion. We have been swayed by the predominating influences of the localities from which we come.

The measures contemplated and easily within the scope of this Convention are to benefit, not the citizens within the radius of a few hundred miles of the boundary line separating the Dominion of Canada and the United States, but the races that inhabit a continent and the world. If the real design of this great gathering of representative freemen is ever carried into practical effect, it will benefit and bless all the millions who now live, or who may hereafter dwell between the far southern capes of Florida and Cape Prince of Wales, at the extreme western end of Alaska, from the Gulf of Mexico to Hudson's Bay, from the Sea of Kamchatka to the Banks of Newfoundland. Man may limit and circumscribe provinces, states and nations by establishing boundary lines; he may say the Dominion of Canada has jurisdiction on one side and the United States of America on the other of an imaginary line somewhere in or near the centre of the Great Lakes and extending overland through the wilderness to either ocean, but God has made the Continent and the inland seas, and has irrevocably fixed the destiny of the peoples who dwell upon this high tableland of the world. Nature's laws are unchangeable and eternal. While some of us are good, loyal subjects of Great Britain, "whose drum beat girdles the earth, and on whose dominions the sun never sets," others are devoted citizens of the young American Republic, whose achievements on land and sea have won the respect and admiration of all civilized nations, yet we are all off-shoots or descendants of the hardy Anglo-Saxon race. In our veins there may course Scotch or Irish blood; we may be Teuton or Celt, or French-Canadian; we may be in religion Catholic or Protestant; or, on one side of the line we may have decended from Pilgrim or Puritan, but in our work to-day we are inspired by the past centuries of progress and a hope for better things for our race for all time to come. We have the inspiration of every forum where advance has been the theme and of every field where blood has flowed in

defence of human right from Runnymede to Waterloo, from Trafalgar to Gettysburg, from Thermopylae to Appomattox, but our way now, thank God, lies along peaceful lines of commercial progress.

The establishment of closer trade relations and more intimate and fraternal commercial intercourse between Canada and the United States will come sooner or later as inevitably as harvest follows seedtime, as the fruitage of summer follows the bloom of the spring. Snow and ice may fetter the rivers and close the Great Lakes in winter, but when summer sunshine kisses the inland seas and the warm Chinook winds creep through the passes of the Rockies, and speed from the sunny areas of the broad Pacific swifter than the great Northern or Canadian Pacific trains that fly over steel highways, led on by flying moguls, the soft bosom of the Great Lakes and the singing melody of the swift-flowing rivers invite to commercial intercourse and interchange between the nations that dwell in amity and peace along their borders. Political machinations and state craft for a time may freeze the warm impulses of a generous people; but the sunshine of gentle courtship and the Chinook winds that come warmly from the Valley of the Saskatchewan and the shores of sweet Athabaska will melt the barrier of an American Protective Tariff and a Canadian Reprisal Act. We shall see, despite all temporary friction and estrangement, peoples whose common interests impel to equitable schedules and reciprocal mutual advantages and harmonious trade relations dwelling together in neighborly peace and loving harmony with less and less of race or political, or national prejudice, and more and more of brotherly love.

If, as a result of this and other like conventions, we can finally agree upon an equitable basis of trade and commerce, and an international deep waterway to the sea, we may hope that within the lifetime of the present good Queen of England, the Empress of India, we may hear her say to her stalwart son and her beautiful daughter, if they two agree, viewing their harmonious trade relations and the wonderful prosperity that would come to both, "What God hath joined together [commercially] let no man put asunder." My country wants no more territory—not another foot, and yours does not, I am quite sure; but we both want trade. We want commerce, we want manufacturers, we want our forests felled, our mines opened, our natural resources developed, our fertile lands tilled, we want population, we want prosperity.

If we can, within a reasonable period of time, open deep waterways by a magnificent Canadian canal and the St. Lawrence River; by the Erie Canal or Lake Champlain and the Hudson River, from the Great Lakes to the sea; and by a canal connect Lake Superior and the Mississippi River, and thence by that great natural trough reach the Gulf of Mexico, South and Central America and southern seas, then the blessings to result to the human race will not be bounded by the shores of this Continent, but will reach to the remotest ends of the earth, and to the islands of the sea.

This work has been well begun; let us see that it does not lag for want of earnest support and zealous championship. The men who, like James J. Hill and Sir Donald Smith, and their associates, have opened the Rocky Mountains and cleft the Cascade Range asunder with lines of gleaming steel, who have knitted together the mountains and the prairies and linked them to the lakes; and men

like Capt. McDougall, who have whalebacked the lakes and the seas with a combination monster of steam and electricity, of steel and fire, more wonderful than ever was portrayed in "Twenty Thousand Leagues Under the Sea," can certainly adjust the simple elements of trade and commerce through an international deep waterway, and over the imaginary boundary line of two homogeneous nations who speak the same tongue, worship the same God, and with equal zeal seek after the "nimble sixpence" and the "mighty dollar."

If we can settle the ownership of, and prescribe the limits of protection to herds of wandering seals in far-off northern oceans by a Behring's Sea Commission, peacefully discussing and honestly weighing the rights of all, in ungodly Paris, we can surely settle all these minor questions in Christian Ottawa and beautiful Washington. We can enlarge the waterways and deepen the channels of lakes and rivers that God, the all-wise designing Engineer of the Universe, has so clearly marked out upon the face of this vast Continent. By the flow of ice in the glacial period and other agencies in the formative state of this world's history, He cut deep into hill and plain the plan of these great commercial highways. The rivers and the Great Lakes are but parts of the harmonious design inscribed upon the continental trestle-board by that Supreme Architect, before whom we should all in humble reverence bow. "In union there is strength."

Let us unitedly plan and strongly build, and work henceforth in harmony with each other, and with God's design and with His decrees, with are unchangeable, immutable and eternal.

Senator Ferguson—I desire to remove an impression that appears to prevail among our friends from the other side. As a representative man in Canada I wish to say there is no selfishness on the part of the Canadian people, nor is there a desire for reprisal, as was referred to in one of the papers read before this Convention. We have exhausted every effort within our power during the last thirty years to secure closer trade relations with the people of the United States. I say this for the purpose of removing a wrong impression which I believe prevails among some of our friends from the other side. In 1866 we sent a delegation to Washington to secure better trade relations; in 1868 we repeated it. That was under a Liberal-Conservative Administration. In 1873, under a Reform Administration, it was tried again. George Brown went to Washington with a number of clerks, and spent three months and $20,000 for the purpose of urging on the people of the United States the desirability of mutual trade relations between the two countries. In 1877 it was repeated, and in 1886 and 1887, and again in 1891. Canada has done everything within her power to effect this closer trade relation. We desire that the Canadian canals shall be free to all; and here I wish to remove another impression made yesterday by a Canadian, and suggested also by the excellent paper of our friend from Toledo, and that was, that we discriminate against American vessels. There is no discrimination against American vessels or American ports, only in this way: By Order-in-Council a rebate was granted on cargoes going through the Welland Canal of the grain that was brought to Montreal; what was not for export did not get the rebate. When it was used for Canadian consumption the rebate did not apply, whether it was a Canadian or an American vessel. The result of that apparent discrimination against Ogdensburg

was this : When the grain went there we could not tell whether it was to be used for home or export consumption. We could not follow the grain. That is the true explanation of the affair. I speak as a representative Canadian, and I say we desire to be as friendly as possible to the people of the United States. I have gone through the trials and difficulties of politics in Canada, and I desire to say this, for the purpose of removing any impression that may have been made on the minds of our friends across the border. I think I may fairly say to my friend, Mr. Smith, that any unfriendliness that has existed has been on the other side. Among the people of both sides I don't believe there is any unfriendliness at all. We have the same kind of hearts that you have, and we desire to see the commerce of this Continent advance in every way, and I can assure you that the whole strength of the Canadian people will be put forward to advance the interests of the cause you are now discussing.

Mr. Faulkner—Our efforts to obtain reciprocity were in the line of natural products only. The Americans were willing to have free trade in manufactures. We have no objection to an interchange of natural products, but they wish to extend it to manufactures. I think you will find this is the cause of the trouble with regard to reciprocity.

Mr. Suydam—I think there is no American representative present better qualified than you, Mr. Vice-President, to respond to these sentiments, and I ask you to say to the Convention what, in your opinion, is the feeling of the American people, and especially the people of the North-West, towards Canada in reference to trade relations.

Senator Ferguson—One word in explanation. I would just refer my friend to the records of Washington to bear out everything I have said. He will find that the treaty that was prepared for submission to the Government at Washington by Mr. George Brown did not even receive the courtesy of mention in the President's communication to the Senate.

A Delegate—The gentleman has spoken of the past. What is the present attitude of the Government ?

Senator Ferguson—The present attitude of the Government is favorable towards reciprocal trade relations with the United States, and it has always been so.

Mr. Smith—I am not here to enlarge on this matter. When I referred to it I merely did so in an incidental way. The point, as I understand it, is simply this, that an American vessel paying tolls through the Welland Canal, and going to an American port, had to pay a higher rate of toll than if the cargo went to a Canadian port. There are some exceptions to that, but they are intricate and complex, and it is difficult for us to follow them all, and therefore I hope and trust that in the future that sort of thing will be brushed away and the pathway made entirely clear.

Mr. Barlow Cumberland—On the subject of these so-called discriminating rates, there was no discrimination whatever on the part of the Canadian Government ; they followed and upheld all the terms of the Washington Treaty. They

gave freely to the whole United States fleets the same use of the Welland Canal and upon the same terms as it was used by Canadian citizens.

Mr. Boyle—Mr. Chairman: I rise to a point of order. This Convention is taking on the character of a political meeting by this extraneous matter. I personally object to it as a member of this Convention. The matter has nothing to do with the question of deep waterways.

Mr. Smalley—The chair is compelled to overrule the point of order, because the question is as to tolls upon the canal which would come under the purview of this Convention.

Mr. Smith—What was the basis of the controversy between Washington and the Dominion that led to the discrimination of the Sault Sainte Marie Canal?

Mr. Cumberland—It was a misconception of what the Canadian people were doing. The American people, in order that they might aid the transport of their internal products to the sea-board, took the tolls off the Erie Canal and made it free for all products of the West which were passing through that highway. We, in Canada, could not afford to go to the same extent that you did, and we made the tolls upon our Canadian canals free upon whatever was going out for export; there was no rebate on business within our own borders. We admitted American vessels to the same privileges as our vessels enjoyed in this respect. The American vessel men asked for something more. They asked to be allowed freedom of tolls when transacting trade in which the Canadian vessels could not be engaged. A Canadian vessel carrying grain from Chicago to Kingston and Montreal for export paid no toll; an American vessel doing the same likewise paid no toll. The Americans claimed that a vessel going from Chicago to Ogdensburg should be granted the use of the Welland Canal free. That was a business in which the Canadian people and the Canadian vessel men could not be engaged, and therefore our Canadian Government said, "That is not upon similar terms, as the canal is used by the Canadian people." There was no answer to that question; they simply said, "We do not agree with you, and in consequence of our non-agreement we will deliberately break the terms of the Washington Treaty and charge your vessels going through the Sault Sainte Marie Canal." What was Canada's reply to that? We objected to it in as honorable a way as one country can to another, and finally our Government paid the charges that the Canadian vessels had been subjected to going through the Sault Sainte Marie Canal. The answer of the Canadian people to that was that they would pay all that, even under a misconception, was demanded of them. We would not cavil with the decision to which you had come and we spent two and one-half millions of dollars in building a canal for ourselves to which we to-day invite the whole continent of America to use on the same terms as Canada. I hope we shall never more hear of this question of reprisals in navigation matters. They are based upon misconceptions and they have been in the past a source of irritation between the two peoples. We are ready to join with you in developing the internal communications of this Continent.

Let me take the opportunity of saying that one of the prime objects that this Convention should seek is to enforce the immediate completion of the work the Canadian people now have in hand. It is now 23 years since we first commenced

to enlarge our Canals to 14 feet. It has taken 23 years to go from 9 to 14 feet. To-day we stand in sight of the time when vessels can go without transhipment from the North-West to the sea. It was promised us in 1890. Afterwards it was again promised to be completed in 1893. This agitation of additional deepening has lost us three years, but the day is past for agitation of that kind because all the contracts have now been let and nothing can prevent the completion of our canals in 1895. What has reduced the rate from the North-West to New York? Your canal is no larger than it was when the rates were 25 cents. Your rates are now between 6 and 7. It has been the gradual increase of the size of vessels between Chicago and Buffalo. We have before us in the immediate future a perfect revolution. At the present time a vessel which brings 100,000 bushels to Buffalo is unloaded into canal boats of 8,000 bushels capacity. It takes one of these large boats and 12 canal boats to reach tidewater. At the present time we can bring down vessels of 14 feet to Kingston, but there we have to tranship. As soon as the St. Lawrence system is completed to 14 feet a vessel with two tows of 50,000 bushels each will be used instead of one vessel and 12 barges. The opening of the completed canals will bring about a revolution in traffic by allowing these vessels to tranship alongside the ocean vessels at Montreal. I hope therefore you will urge the immediate completion of the present incomplete system and this completion will then bring the fruition of 23 years long work and be a step in the direction in which you all desire to go, namely: the securing of deeper communication between the interior of the Continent and the sea.

E. V. Smalley—I have but a few words to say in reply to Senator Ferguson. He has told us of the efforts of the Dominion of Canada to secure a Reciprocity Treaty with the United States and left the impression on the Convention that the fault was with the United States that the two countries have not a larger measure of reciprocal trade. Senator Ferguson failed to tell you that the effort of Canada has always been to secure freer trade in natural products only. You are very shrewd business men in Canada and we are pretty smart in the United States, and we saw that what you wanted to do was to sell us those things which you had to sell and which we wished to buy without giving us in return the right to sell you the things which we have to sell and which you would buy if there was no tariff. Now we don't want to be misunderstood in this respect. We have nothing in the way of raw material to sell you except our coal, and you are bound to buy that whether we put a tariff on it or not. What we did want to do was to sell you in return for your barley and wheat and lumber and cattle was certain of our manufactured products and that is exactly what your statesmen didn't want to let us have. In our late tariff bill we have made free trade in lumber. I think that was a mistake. I think we ought to have got something back, as free trade in agricultural implements.

Mr. Nettleton—You have got to have the lumber any way.

Mr. Smalley—No; we can get our own lumber, but it may cost us a little more for the Eastern States.

Mr. Wheeler—I desire to raise a point of order. I understand this discussion is wholly foreign to the Convention. It is not a wise policy to bring up these political questions here.

Mr. Thompson—Strictly speaking Mr. Smalley is not in order, but since Senator Ferguson was allowed to speak on the subject I think it is only fair to allow the Vice-President to reply.

Mr. Smalley—That is all I have to say. We were perhaps a little too smart as traders and business men on both sides and we were not able to get together as we should have done and unite upon some basis of exchange of products.

COLLINGWOOD-TORONTO AIR LINE.

Mr. Frank Moberley read the following paper:

Mr. Chairman and Gentlemen: The Toronto and Collingwood Air-Line Railway, although perhaps not of the imperial magnitude of other matters brought before you, yet will beneficially affect so large a section of the community as to be worthy of your earnest consideration. This railway it is proposed to build from Collingwood, which is at the extreme southerly end of Georgian Bay, to Toronto, on as nearly an air-line as possible. The distance is about 70 miles, and the country passed over is particularly favorable for railway construction, and (one of the principal features in a railway intended for cheap carriage) the grades will be light.

At Collingwood there is an excellent harbor, approachable in all weathers, and which can be deepened to any extent necessary at a reasonable cost. The approach from the land side is good. It is proposed to make the Toronto terminus at Ashbridge's Bay; the trade being principally with the East, that would be the most convenient place for handling a heavy traffic.

This railway would place Toronto within two hours' haul for freight of the trade of the Upper Lakes, and being furnished with most approved appliances for the handling and transport of grain, it is intended the cost of carriage shall be reduced to a minimum, the through rates being such as to offer a material improvement on those now in vogue. This will be principally effected by the saving in time and distance.

Taking a point outside of the Straits of Mackinaw which is common to all shipping either from Lakes Superior or Michigan, the distance to Toronto via the Air-Line is 300 miles, which makes it 340 miles shorter than the all-water route; it places Toronto that much nearer the sea by the St. Lawrence route, and it also places freight by this route 290 miles nearer Boston and New York than by way of Buffalo, besides which shipping would avoid the dangerous navigation of Lakes Huron and Erie. Grain would be placed in Toronto with less time and cost than it could be placed in an equally favorable position by any other route, and Toronto has, as a distributing point, advantages held by no other place in regard to the number of competing routes that would receive the grain here. That for export, having the choice of the St. Lawrence, Boston or New York, while that required for the great centres of population to the south of us would reach its destination by way of Oswego and Rochester.

The amount of grain and its products travelling by northern routes from west

to east amounts to about 400,000,000 bushels per season, less than one-half of which is for foreign markets, the balance being consumed in the Eastern States and Maritime Provinces. Some thirty or forty million of bushels of this reaches its destination by routes east of Toronto and the balance by routes west, but principally by way of Buffalo.

The port of Buffalo received by way of water alone last season 190,000,000 bushels of grain, and it also received 10,000,000 barrels of flour; and Toronto, although the most favorably situated to handle this traffic, did not receive a pound. That new competitors are entering the field for this trade is instanced by the construction of the Ottawa & Parry Sound, the Ottawa, Irondale & Orillia Railways, both of which will run to the Georgian Bay, and neither of which will help Toronto trade.

With Toronto as a distributing point a trade would be opened up by way of the St. Lawrence with the Maritime Provinces, the transfer of grain being made to ocean vessels, say at Pictou, where a return cargo of coal, or the ocean vessels' cargo for the West, would be obtained. The Maritime Provinces import their breadstuffs, and import largely in excess of their local requirements to meet a trade demand of their own. The ports of River Du Loup and Rimouski would be favorable points to open a trade with New Brunswick.

The bulk of all the trade, however, would always be with Oswego and Rochester, where the grain is required for home consumption by the country south of those ports. Oswego and Rochester also provide the principal supply of hard coal; and it is hoped arrangements can be made to handle this so cheaply as to furnish return cargoes west of Collingwood.

As a commercial enterprise the possibilities of the Air-Line can be readily arrived at. Having the shortest and cheapest route, we are pretty sure of a share of the traffic, knowing the amount of that traffic open for competition, and being able to accurately estimate the cost of building and maintaining the road. We have data by which we can form a good idea of the results.

Toronto has expended enormous amounts on improvements. It is necessary she should lose no opportunity to increase her trade and revenue to be able to maintain her works in efficiency.

Mayor Telfer, Collingwood—As my name appears to a resolution that was handed into the Committee on Resolutions, advocating this project, I presume a word or two in support of it will be in order from me. While I am in the fullest sympathy with the great scheme of canal enlargement of our waterways, yet I believe, as time is the essence of the contract in this as in other things, that the most direct route will be adopted, and that is certainly via Georgian Bay and through the Province of Ontario into Lake Ontario. As Mr. Moberley has told you, this is the most direct route, and the work can be completed in a short time. It shortens the distance some 330 miles, and can be completed at an estimated cost of 2½ millions. If we as Canadians put our shoulders to the wheel I think we have the golden opportunity of capturing the trade of the West, inasmuch as the enlargement of the canals is not within the ability of this country to cope with in

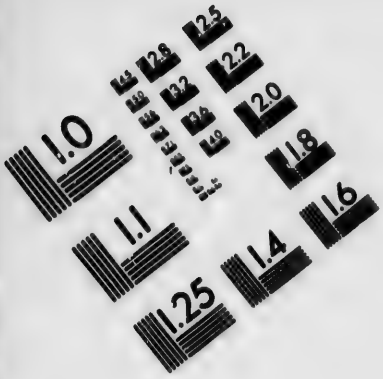
the immediate future. I think as Canadians we should think twice before inviting international effort to complete our waterways.

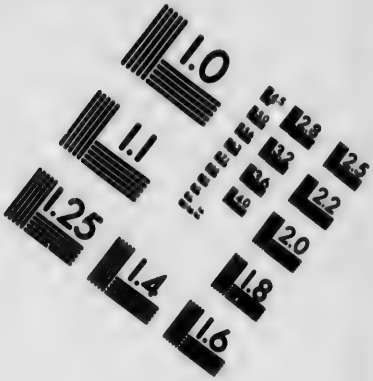
Mr. Nettleton—There is one phase of this discussion that has been entirely lost sight of. What effect will the deepening of the waterways have on the lowering of the Great Lakes? As you are no doubt aware, the water is going down on the Upper Lakes, and it is now two feet lower, nearly all over the lakes, than it was some years ago. It is said the deepening of the Lime Rock crossing has been the cause of that. In building the air-line proposed by Mr. Moberley we would get over that difficulty. This route will save the deepening of the Welland Canal. The Soo Canal is to be 20 feet. We have 16 feet in Collingwood, and it can easily be deepened to 20 feet. It is proposed to have floating elevators at Collingwood, and to run the grain by large cars through to Toronto. The estimated cost is 1 cent per bushel. By this Air Line route we save over 300 miles of lake navigation. The project involves elevation, but I understand this process greatly improves the wheat. I think this is the only immediate and practical project by which we can relieve the congestion of the Upper Lakes and help the farmers of the North-West.

Mr. D. Blain—I think the Association ought to recognize as within its scope such a project as this. That was the opinion of the Committee that arranged the business of this Convention. I think we ought to consider the transportation of freight by any route, and the scope of the Association ought to be widened to include projects such as Mr. Moberley has presented for our consideration.

Mr. Steele—I think cheap transportation of produce is fairly within the scope of this Association, no matter by what method that cheapening may be effected. Mr. Moberley is a gentleman of wide experience. He has been in the railway business since 1866. By his scheme Mr. Moberley will be able to carry grain from Collingwood to Toronto at one cent per bushel. He proposes to build cars of one hundred tons capacity. If he can do what he says, the whole matter is brought within the bounds of feasibility. While it is my earnest desire to see a 20-foot channel, at the same time I recognize the fact that the construction of such a channel is going to be the work of years. If Mr. Moberley can carry grain between the two points for one cent a bushel, and save over 600 miles on the round trip, he is going to assist very largely in solving this problem. I think his scheme is worthy of the endorsation of this Convention. We might fairly go to the Local Government and ask a bonus for it, and the Dominion Government, too, might be asked to aid it.

The Convention then adjourned for lunch.





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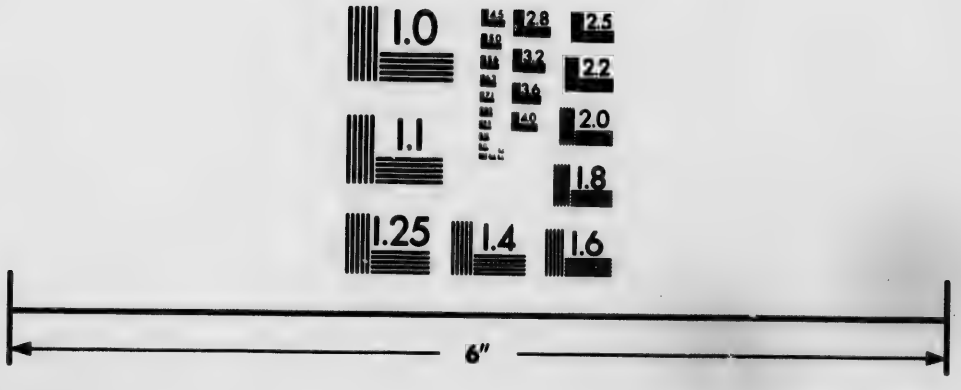

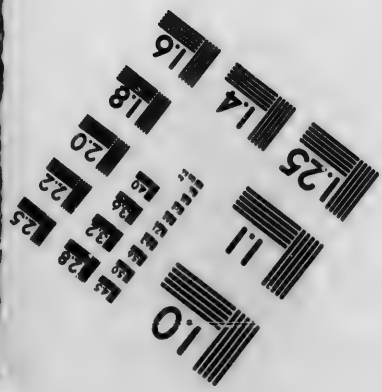

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WEDNESDAY, SEPTEMBER 19TH—AFTERNOON SESSION.

The Convention resumed its sitting at 3 o'clock, Ald. Thompson presiding.

The Chairman—The first business is Mr. Conmee's paper on the St. Lawrence route.

AN ENLARGED WATERWAY TO THE ATLANTIC SEABOARD.

Mr. James Conmee, Port Arthur—What I have to say is not altogether on the St. Lawrence, though I may touch on that question before sitting down. I desire to discuss this canal almost entirely from a Canadian standpoint. I do not agree with those who say that the deepening and enlarging of these waterways is not within the resources of the Dominion of Canada. I see no reason why these canals could not be under joint control, but I contend that the completion of the work is quite within the means of the Dominion.

To satisfy the public mind that it should be undertaken by our Government it is necessary to show :

1. That the advantages to the general public will be commensurate with the expenditure.

2. That there is an urgent and public necessity for the demand made.

3. That the route proposed is the best that can be selected.

4. That it is feasible.

5. That its accomplishment is within our means.

If it can be shown that the sum of money that may be required to carry out the undertaking in view cannot be otherwise employed to so great an advantage to the general public, the claims of the undertaking to public attention is at once established.

That the undertaking, if carried out, would be of great public advantage may be seen by a comparison of the present cost of transportation from Western Canada to the seaboard as compared with what would be available if the contemplated works were completed, and by a consideration of the advantages that would otherwise accrue by reason of the changed condition.

The Canadian Pacific Railway lake and rail rate from Fort William to Montreal is at present 15 cents per 100 pounds, or 9 cents per bushel, on wheat; the average rate at present by the all-water route from Fort William or Port Arthur to Montreal (and I presume about the same rates are available from Duluth), is 6½ cents per bushel, chance cargoes being carried as low as 5½ cents, thus ranging as

high as 7½. There are but a few vessels engaged in the traffic on the Lakes that take their cargoes, or even a portion of their cargoes, through the St. Lawrence Canals to Montreal, and but a small percentage of our grain is carried that way.

The value to the public of water carriage as compared with rail carriage, and the advantages of canal construction to increase the scope of navigation, is forcibly shown by Mr. E. L. Corthell, an eminent American engineer, in an able and instructive paper written by him in 1890, in which he estimates the cost of enlarging the St. Lawrence Canals to 21 feet depth, and to the desired dimensions, at $27,000,000, assuming our canals to have now a depth of 14 feet throughout.

The average tonnage of cargo through the St. Lawrence Canals to Montreal is about 500 tons. With the waterways completed to a uniform depth of 20 feet the tonnage of cargoes would increase to 3,000 tons and upwards.

Statistics show clearly that reductions in freight rates have, generally speaking, been forced upon the railways by water competition made possible by canal construction; and that as the waterways have been enlarged, the capacity of vessels has increased and freight rates have been thereby correspondingly cheapened. Railways, too, in order to compete, have been forced to increase their carrying capacity. A few years ago 10-ton cars were the rule, then 20 and 30 tons, and so on up to 40 and 60 tons, and rates have fallen from 2½ cents per ton per mile to ½ cent per ton per mile.

In 1855 a report was signed by the superintendent of the four trunk lines in the State of New York, and presented in Congress, in which it was claimed that the lowest rates at which ordinary freight could be carried by rail and pay interest and expenses was an average of 2½ cents per ton per mile for agricultural products, 3 cents for groceries, and 4 cents for dry goods.

The average cost per bushel for the carriage of wheat from Chicago to New York, from 1868 to 1893, by the Lakes and Erie Canal, was 5.44 mills per ton per mile. The lake and rail rate was 6.66 mills per ton per mile, and the all-rail rate 12.67 mills per ton per mile. The present all-rail rate is but 5 mills and under per mile.

Vessel owners who are taking cargoes through to Montreal state that with a uniform depth of 20 feet they could employ larger vessels, and could make as much profit on a rate of 2½ cents per bushel from Lake Superior ports to Montreal as they now make with the present class of vessel, and at the present rates.

From statistics submitted to Congress in 1891 by the engineer of the Sault Canal, it is shown that the average cost of lake transportation for the season of 1890 was 1½ mills per ton per mile. And by the statistician of the Interstate Commerce Commission it was shown that the average all-rail rate was 9.22 mills per ton per mile. Coal has been carried from Buffalo to Duluth, about 1,000 miles, for 25 cents per ton, or a rate slightly less than 1 cent per bushel on wheat.

With such a channel completed our grain and other exports would seek tidewater by the St. Lawrence route, and a much increased volume of the import trade would be drawn to it as well, while local traffic and interchange between the east and the west would rapidly increase. To be in the pathway of such a com-

merce would be of great advantage to our river and lake ports. Assuming that the total cost of enlarging the waterways from Lake Superior would aggregate $50,000,000, the annual saving to Canadians on the present basis of production would be ample, as I shall presently show, to pay interest and sinking fund charges on that sum.

Of the 2,678 miles, from Fort William or Port Arthur to Liverpool (and which is over 700 miles shorter than via Buffalo and New York) there is but 71 miles that is restricted by natural obstacles, which here and there impede commerce. Is it to be contended that the modern resources, skill and energy of the Western half of this continent, or even of this nation, are not capable of overcoming these barriers that at present obstruct our progress, and not only handicap our people in their competition with the products of India, Russia, and Argentina, but permit avaricious grain speculators to extort undue profits from our producers?

It is not only Ontario, Quebec and the Western Provinces, that will be benefited, but the Maritime Provinces as well, as a means for their coal, iron, and other products to reach the West will be made available. With the Chignecto Ship Railway completed their shipping could participate in the lake traffic without difficulty. The benefits to be derived from the undertaking are not easily estimated, but some idea my be gathered from the fact that grain has been lately carried from New York to Liverpool, over 3,000 miles, for 2½ cents per bushel and under.

It is a fact well known that the major part of our grain is now shipped to American Lake Ports, west of the Welland Canal. Why is this the case? The answer is to be found in the fact that over 400 vessels now plying on the Lakes, mostly American, draw too much water when laden to pass through the Welland Canal. The great majority of vessels, both Canadian and American, are shut out from the St. Lawrence Canals by reason of their short lockage and shallow water. The necessity for increasing the capacity of our waterways is forcibly emphasized by the fact that while the traffic through the Sault Canal, has increased to 10,000,000 tons annually, the tonnage of the St. Lawrence Canals has remained about the same as in former years, being for the year 1892 but 518,373 tons both ways, the in tonnage being but 31,958 tons. It is quite evident that if Canadian vessels are to compete with American, or, in other words, if they are to handle our own grains, they must be equal in capacity.

The Welland Canal has 14 feet of water, but already the vessels that cannot pass through it when loaded have an aggregate tonnage of over 500,000 tons, while those that do pass through are obliged to reduce their cargoes by over 50,000 tons annually in order to get through, and at or below Kingston further transhipments are made so as to enable the few vessels that engage in the St. Lawrence trade to get through to Montreal.

The question is to be considered, however, from another point of view, viz., what does the producer under present conditions realize for his product, and what would he realize were the channel enlarged? The Manitoba farmer, the producer of the best wheat in the world, gets from 38 to 39 cents per bushel, when it is selling in Liverpool for 71 cents, a difference of 32 to 33 cents. This is not all

occasioned by freight charges, for with the present rail rate from Winnipeg to Fort William, 10½ cents per bushel, and the rate from Fort William to New York via Buffalo, 6½ cents (the average rate during the season of 1892, as will presently appear), and the ocean rate, 4 cents, and allowing 3 cents for elevator and commission charges, we have a total of 19 cents for freight and other charges from Winnipeg to Liverpool, so that the producer should even now receive 52 to 53 cents per bushel, or 10 to 11 cents over the present price, and would probably do so were it not that he is handicapped by New York control. This view of the situation was forcibly put by Mr. James B. Campbell, of Montreal, in a letter published by him in April last. Mr. Campbell shows clearly that prices are based on New York grades, which are much inferior to our own, and that New York capital takes advantage of our want of facilities and is enabled to make abnormal profits at the expense of our farmers. The reason for such a state of affairs is the inability of our vessels and canals to handle the trade. Our producers cannot hold over their grain, and to compete successfully they must have facilities to market the yield each year, between the harvest and the close of navigation, at the lowest possible cost. It is argued that we should go more into mixed farming, so as to condense the products. The advice is good, but it does not obviate the necessity for this enlarged channel. Over-production may, and doubtless will, cause a fall in the price of meats, cheese and butter, just as it has in wheat, besides the product in whatever form, must be marketed, and in any case the cost of transportation is the important question and point of difficulty, so far as western Canada is concerned. If the country is to sustain a large population, cheap and rapid transportation must be afforded. The distance from Fort William, or Port Arthur, to Montreal, by the all-water route, is 1,025 miles; from Chicago to Buffalo the distance is somewhat less, but for water rates it may be considered practically the same. Wheat has been carried from Chicago to Buffalo for 2 cents per bushel. Vessels are taking cargoes of three thousand tons and upwards because of the deep waterway that now exists on that route. Were our waterways improved we could get as cheap rates, or nearly so, from Fort William to Montreal as we now obtain from Chicago to Buffalo, which may be put at 2½ cents per bushel, and having regard to the downward tendency of freights and to the competition that would arise, it is not too much to assume that with the ocean rate at 4 cents and under Manitoba wheat could be put in Liverpool from Fort William for 6½ cents, making, even with the present rail rate of 10½ cents from Winnipeg to Fort William, a total of 17 cents per bushel freight charges to Liverpool.

But further rail competition between Fort William, Port Arthur and Manitoba, which the carrying out of the enlarged channel would greatly stimulate, it is reasonable to assume, would bring the inland freight rates down sufficiently to reduce the figure to 15 cents, and even to 12 cents. Grain is now carried by rail from Buffalo to New York, 440 miles, the same distance as from Winnipeg to Fort William, for 5½ cents per bushel. Assuming our waterway completed as proposed, and taking the lake and ocean rate at 6½, and the rail rate between Manitoba and Fort William at 5½, we have 12 cents freight charges from Winnipeg to Liverpool. But even assuming that the rail rate from Winnipeg to Fort William will not fall below 6 or 6½ cents, and allowing also 3 cents for elevator and commission charges,

we would be able to put Manitoba wheat in Liverpool for from 15 to 16 cents total charges, and taking the present Liverpool prices at 71 cents the Manitoba farmer should receive 55 or 56 cents for his wheat, or from 15 to 16 cents over the price he at present receives. That this is not an over estimate of what may be expected is shown by the annual report of the Department of Railways and Canals, Canada, for the year ending 30th June, 1893, which gives a statement of monthly freight rates for the season of 1892, from which I take the following: This report shows that the rate on wheat from Duluth to Buffalo during the season of 1892 ranged from 2¼ to 4 cents per bushel, the average being 3 cents. The canal rates on wheat from Buffalo to New York for the same season range from 2½ to 6 cents per bushel; the average for the season was 3½ cents. So that if we take the two average rates we have 6½ cents total freight charges from Duluth to New York. The average monthly rate during the season from Fort William to Montreal is not given, but I learn from reliable shippers that during 1892 it ranged from 6½ to 9 cents, the average being 7¼ cents per bushel, so that the Montreal route was in 1892 at a disadvantage as compared with the rate via Buffalo to New York of 1¼ cents per bushel (and I assume proportionately so on other freight) notwithstanding that via that route there are over 400 miles of canal to traverse, while by the St. Lawrence route there are 71 miles.

The facts and considerations here presented establish the affirmative of the propositions under review, and fully warrant the conclusion that the advantages amply justify the proposed expenditure.

The greatest problem before the Canadian people to-day is the question of how best and quickest to reduce to a minimum the difference between the price paid by the consumer for our products and that realized by our producers.

In addition to the foregoing there is the Horontario Ship Railway, or Canal, as the case may be, which is incidental to this undertaking, but does not necessarily form a part of it, and if carried out would reduce the distance by at least 275 miles, and would doubtless afford a further saving in freight rates.

What I have said in regard to Canadian traffic and the interchange of commodities between the Eastern and Western populations applies with equal force to the United States. They, too, will be greatly benefited by the deepening of this great waterway—which should be free,—and will share in the prosperity which it will spread over the great basin of 457,000 square miles tributary to and drained by the Great Lakes.

Estimating the present export of western Canada (that will be affected) including grain, flour, live stock, etc., to be equal to 15,000,000 bushels of wheat, a figure which I am assured is well within the mark, the direct benefit to our producers would, as already shown, be from 15 cents to 16 cents per bushel, or a saving of two million two hundred and fifty thousand dollars annually. Canada can borrow the $50,000,000 (the estimated cost of the work) at 3½ per cent. The interest on this sum annually would be $1,750,000, leaving still to the good out of our annual saving on exports only the sum of $500,000, which, if invested annually as it accrues, will, with the accumulated interest, liquidate the debt for construction in forty years. Even if the expenditure was $60,000,000 as some

estimates have put it, the saving on the class of exports would pay the interest on the cost and liquidate the same in fifty years. It will take some years to execute the work, and interest would have to be paid on the sum expended each year for which there would be no corresponding return. But even assuming that the charge would amount to five or six millions during the progress of the work, the saving to the country on imports and local traffic between Canadian ports will fully compensate for the charge, to say nothing of the prosperity that it will bring to the people. Besides, the country is not going to stand still. If our exports from western Canada are now equivalent to 15,000,000 bushels of wheat, it is reasonable to assume that ten years hence, or by the time the channel is completed, it will be equal to over 20,000,000 bushels, the extra saving on which will be ample to cover all possible contingencies. The conclusion, therefore, is inevitable that in our own interest, and as a further bond to bind the Provinces together, Canada should proceed with the work.

It may be argued that although the United States has spent vast sums of money on the improvement of the Mississippi River, traffic on it has not increased to the extent anticipated, but it must be borne in mind that the case with which we are dealing is quite dissimilar to that of the Mississippi. What can be accomplished here can never be hoped for in that connection. It is, however, a fallacy to assume that because the volume of traffic on the Mississippi has not increased to the proportions anticipated, therefore the benefits are not commensurate with the expenditure. Mr. Corthell in his most excellent paper states that the improvements on the Mississippi give a direct advantage to the producers of the Mississippi Valley of from $50,000,000 to $100,000,000 annually. For the reason that it not only affords greater shipping facilities, but, if for any cause the freight rates by rail rise, the river acts as a regulator to bring them down again.

However the work may be accomplished, whether jointly or separately, it is a work of the first importance in the interests of both Canada and the United States. If constitutional questions, or national sentiment, or other reasons prevent a joint control, yet each nation can complete those portions lying within its own borders. The St. Lawrence and its connections form a long boundry line and each nation can improve stretches of channel on its own side. Already we reap great advantages from the many channels connecting this great system, which have been deepened at the expense of the United States, and in like manner they have received advantages by expenditures that were made by the Dominion of Canada. No sound reason exists why United action should not be taken. Surely those two great nations, with kindred peoples and a common language, are not long to be baffled by barriers to their commerce which are inferior in point of difficulty and magnitude to works that have been already accomplished by each.

Canada has already expended in round numbers $100,000,000 on her great national railway from ocean to ocean, which has been of great advantage to the nation, but no one can dispute but that the enlargement of our waterways to the seaboard can be accomplished for a much less expenditure and that ic will be of much greater public advantage.

The history of the St. Lawrence Canal system, viewed from the light of to-day and with our present ideas of the future, present a lamentable want of foresight.

No doubt much of our backwardness in this respect is to be accounted for by the Colonial system of Government that existed prior to 1791, and that which existed down to Confederation, and by financial considerations and other exigencies that had to be met in those early days. But making allowances for all these and considering that we have had a National Government for over a quarter of a century, it is quite evident that what has most retarded our canal improvement is the want of a comprehensive and systematic scheme of construction. We are not alone in this respect, our American neighbors have made the same mistakes, and are less excusable as their means were more ample. In their haste to traverse every section of their great country with railway lines they have overlooked the cheaper and readier means of transportation which a proper system of canals would have afforded them. We may claim to have followed their example, but whatever excuse we may assign for the mistakes of the past, there can be no excuse for further delay in putting our canal system on a proper basis.

Our best energies and our first attention should be directed to the one means by which our producers can be put in a position to compete with those of other countries. The advancement of the material interests of our own people should have paramount consideration over such novelties as a "Fast Atlantic Line," and "Oriental Trade." These latter are well enough in their way, but they will do very little if anything to enhance the price of our products.

It was a military necessity that at first brought about the construction of the St. Lawrence Canal system, and the people now have it in their power to make it a political necessity to put them on a proper basis, and to have them completed with despatch.

Without going into a minute history of the St. Lawrence system of canals it may be pointed out that the total mileage of the canals, and their artificial connecting channels, is 71 miles, with about 50 locks and a total rise of 553 feet.

The Lachine Canal.

A short sketch of this canal, which overcomes the St. Louis rapids at Montreal, may be interesting. Although the construction of the canal was strongly urged at various times nothing was accomplished until after the passing of the Constitutional Act of 1791. The first legislation regarding it was in 1815, when the Legislature, on the recommendation of Sir George Prevost, passed a Bill appropriating £25,000 in aid of the work. Its importance, from a military point of view, was obvious to the military authorities. But peace being declared soon after the passage of the Bill, nothing further was done until 1819, when a Bill was passed repealing the former Act and incorporating a Joint Stock Company, with a capital of $600,000 to construct the canal, but the scheme proved abortive and in 1821 a Bill was passed cancelling the charter of the Company and authorizing the Government to undertake the construction of the canal as a Government work. Commissioners were appointed to carry out the project and ground was finally broken in July of that year. The British Government contributed $50,000 towards the work on condition that all military supplies should pass free.

The canal was opened in 1825. It was 28 feet at bottom, 48 feet at the water line, with 4½ feet depth of water, and had seven locks 100 x 20 feet built with

stone. The total length was 8¼ miles. It was no sooner built than it was found to be inadequate to the requirements of commerce, especially to that of Upper Canada. The project of uniting Upper and Lower Canada was at this period a burning question, and with it the enlargement of the canal. A new line and many other schemes were advocated, and it was not until after many vicissitudes that the old location was adhered to and a scheme for enlarging the locks to 200 x 45 feet, with 9 feet depth of water on the sills, and with a breadth of 80 feet at bottom and 120 feet at the water surface was put under way, the new locks being constructed by the side of the old ones, so as not to impede navigation. In 1844, during the progress of the work, it was decided to deepen locks 1 and 2 to 16 feet depth of water, so as to admit the sea-going vessels then trading to Montreal into the first basin of the canal. Craft were passed through the new locks in 1848 and the work finally completed in 1862.

The Present Canal

Is on a new line and is of the following dimensions:

Length	8½ miles.
No. of locks	5
Depths at 3 locks	14 feet.
" 2 "	18 "
Depth of channel between locks	12 "
Dimensions of locks	270 x 45 feet.

So that there are two lines of canal. The history of this canal is the history of all the other St. Lawrence canals, with but slight difference. Military necessity and private companies combined finally interested the Government, the Imperial Government aiding in several instances on the same conditions as at Lachine. The history of the Welland was almost identical with that of the Lachine, except that the Joint Stock Company finally succeeded in completing the first channel. The Government took final control of this canal in 1841. Here too there are two lines of canal. And the same is the case at Beauharnois and several other points. Had a comprehensive and systematic scheme been conceived at first the expenditure up to date would be ample to give us a 20 foot channel throughout.

In any scheme for the improvement of the St. Lawrence River and its Canals to accommodate the commerce of the future, the ideal should be not only to reduce the lift-locks to the lowest possible number, but to secure a capacity throughout that will accomodate the ocean-going vessels of the present time.

In carrying into effect the enlarged system proposed, it will doubtless be found advisable in the majority of cases to adopt new lines. This does not mean that the expenditure on the old lines will be a loss to the country, as in case they can be utilized as power aqueducts, and will with proper management yield a revenue equal to interest on the cost of their construction.

With new and improved appliances the cost of executing such works will be greatly reduced as compared with past expenditure.

In considering the enlargement of the channel at Lachine to the dimensions proposed by the platform of this Convention, it may be asked, Why not utilize the channel which Nature has provided, instead of making an artificial one? Being familiar with the conditions at this point, I believe the north channel could be utilized, and the lockage reduced to one lift, by cutting a channel from the Montreal harbor to the easterly outcrop of Au Heron Island and by damming that channel of the river, from the island to the north bank, and running a wing-dam from the head of the island to the head of the rapids, and putting in a lock or a hydraulic lift to raise vessels from the lower channel to the water above the dam. From the Montreal harbor to the channel of the river south of Nun's Island has at present a depth of from 12 to 18 feet of water until the head of that island is reached. From there to Au Heron Island the water varies from 4 to 25 feet, so that the heavy cutting to reach the desired point would probably not exceed 2½ miles. The banks of the island are 21 feet above the present water level, and the bed of the river has a deep channel, running from the foot to the head of Au Heron Island, varying from 17 to 25 feet in depth and from 18 to 40 feet in width. So that, having regard to the rise of water effected by the cross and wing-dams, all that would be required above the cross dam would be the cutting off of the projecting points of the river bottom to the head of the rapid. The work would be light, except at one or two points, for short distances only. The effect of the cross dam and the wing-dam would be to deaden the current, so that vessels could navigate the river without difficulty. A glance at the charts and an examination of the ground will show that the conditions are favorable for this plan. I am not giving my own opinion only, but that of several engineers who have examined into the matter closely. The only surprise is that it has not been previously adopted, as the dam in itself would afford a great water power, which could be utilized in the city, and which would, I believe, prevent very largely the periodical back-water floods at that point.

Similar conditions exist at most of the other points. The total rise of the new Soulanges Canal at Beauharnois is 82½ feet. Of this rise 70 feet is made in the first three-quarters of a mile by four lifts of 17½ feet each, showing that conditions exist by which the lockage could be reduced to one or two lifts. But we are not called upon to define the scheme by which the work is to be carried out. We will have done our duty when we have established the necessity for its execution, and shown that the benefits to the general public warrant the expenditure. The Government of the day are charged with the administration of the public revenues and the conduct of public works. Upon them devolves the duty to determine the scheme by which this great work shall be acomplished.

The Chairman—Discussion is now in order.

Mr. McIntyre—While I am glad to hear such a rose-colored view, I would like to get Mr. Conmee to explain how he can run a vessel, even of the largest size, from Fort William to Montreal at a 2½ cent rate?

Mr. Conmee—The distance is only 1,000 miles and they are carrying from Duluth to Buffalo and from Chicago to Buffalo for two cents.

The Chairman—For one cent.

Mr. Commee.—We are safe in saying two. If they can carry at that rate now, with ample water channel they can carry from Fort William to Montreal at the rate I have quoted.

Mr. McIntyre.—But that is all open water, and you cannot run at the same rate in a canal.

Mr. Commee.—But of the 1,000 miles, there are only 71 miles of canals, and the freight now from Chicago to Buffalo is only two cents.

Mr. McIntyre.—But there are no canal tolls, that takes 20 cents a ton off.

Mr. Commee.—My calculation was based upon the assumption of free canals.

Mr. McIntyre.—In all calculations as to cheap rates you must take into consideration the return cargo. According to Mr. Commee's figures you would need full return freights.

Mr. Commee.—You would have the return freights. I did not enlarge upon it, as I did not want to take up the time, but this scheme is common with the Hudson River and Lake Champlain route. The best interest of Canada would be served by affording easy means of reaching the great cities of the United States.

Mr. Steele.—During this summer grain has been carried from Chicago to Buffalo for 1¼ cents, and in some cases the vessels have only been able to obtain ⅞ cents. None of the vessels carrying at this rate have drawn over 17 feet of water. In view of those facts, it seems to me that Mr. Commee's estimate is not too sanguine of what can be done when the 20-foot channel has been made.

Mr. David Blain.—Can you inform me, Mr. Chairman, how the Committee on Resolutions will proceed—will it be in the form of a report giving original resolution or will they report the resolution that has been submitted to them?

The Chairman.—The Committee is now deliberating on the resolutions and whatever conforms to the spirit of the Convention will be submitted to the Convention.

Mr. Moberley.—Will the resolutions be confined to the subject of waterways?

The Chairman.—I could not say that, but I should think that they would take a broader view than that. I think we shall all be glad to hear from Mr. Harvey on the subject before the Convention.

Mr. A. Harvey.—I came here to listen and not to speak, but in answer to your kind invitation I would like to make one suggestion. When, by means of deep waterways, you have reached the head of the Great Lakes, you are only at the edge of the Prairie Country, but at the end of the Canadian and the American Great Lake routes are enormous water powers, and I should like to see as an extension of the waterway system a project of transportation on land, by means of railways run by power developed by electricity. I think that before half the members of this Convention go over to the great majority we shall see the water powers of Keewatin and Kakabekha Falls and the enormous powers of the Lakes

near the height of land in Minnesota profitably employed in furnishing transport and thus reducing freight rates from the interior prairies to Lake Superior. If we can save the cost of coal, and greatly reduce the expenditure for engineers and train hands, we shall probably get the interior rates reduced to half the present figures.

Mr. Davidson announced that the Committee on Resolutions was ready to report, and it was ordered that the report be presented.

Alderman Thompson vacated the chair in favor of Vice-President Smalley of St. Paul.

Mr. Flower Mr. Chairman and Fellow-Continentals, I will now read the report of the Committee on Resolutions. I hope you will never know how much trouble it has taken to arrange the brief platform that we submit to you. I may explain that we first adopted a resolution that we would, as a Committee, deal only with such notices and resolutions as came within the scope of the call issued from Toronto, and relating to a main deep water channel from and through the Great Lakes to the Sea. That is the explanation of the exclusion of many resolutions that were submitted.

REPORT OF THE COMMITTEE ON RESOLUTIONS.

Gentlemen of the Convention: Your Committee, to whom was referred all notices, prayers and resolutions, organized by adopting the motion of Frank A. Flower, that only matters coming within the terms of meaning of the call under which this Deep Waterways Convention came together be considered, and that all others be held for such action as the Convention itself might determine.

We have prepared and unanimously adopted and present as our report the following:

PLATFORM.

"Whereas, This Convention has assembled for the purpose of promoting the union of the Lakes and the high seas by waterways of the greatest practicable capacity and usefulness; and, recognizing the supreme utility of such waterway development,

"Resolved, That the depth of all channels through the Lakes and their seaboard connections be not less than twenty-one feet, and that all permanent structures be designed on a basis of not less than twenty-six feet, in order that the greater depth may be quickly and cheaply obtained whenever demanded by the future necessities of commerce.

"Resolved, That this Convention recognizes the utility of the natural route to the sea by the St. Lawrence River as most quickly and cheaply improvable, and is also impressed with the commercial necessity of the route reaching the Atlantic Ocean via the Hudson River.

"Resolved, That we recommend that the Governments of Canada and the United States appoint a joint commission to consider and report fully upon the advisability of the two countries uniting to establish deep ship channels from the

Great Lakes to the Sea, free and neutral, at joint expense, under joint control, as well as the probable character and expense thereof, together with the equitable share that should be charged to each country, and whether the two countries may not co-operate in said undertaking in all matters necessarily International in character.

"Resolved, That we cordially approve all projects designed to extend marine commerce by means of waterways from the Great Lakes into new territory.

"Resolved, That as a preparation for the joint promotion of common interests, it is desirable that a permanent court should be constituted for the decision by rules of law of all questions of an International character which may in any wise arise between the peoples and Governments of the British Empire and the United States.

"Resolved, That these resolutions be respectfully communicated to the Governments and Parliaments of Great Britain and the Colonies of the British Empire and the Government of the United States."

The following resolutions were also adopted, but not as a part of though intended to be supplemental to the general platform :

"Resolved, That with the least possible delay the present locks of the St. Mary's Falls Canals should be deepened to twenty-six feet over their miter sills.

"Resolved, That it having come to the knowledge of this Convention that Canadian boats are prevented from passing through the Whitehall Canal, and are therefore unable to use the water communication between Montreal, Ottawa and Quebec to New York, while American boats have the freedom of the Canadian Canals, which enables them to use this route free and untrammelled, the Government of the United States is respectfully urged to take steps at their earliest convenience to carry out liberally the treaty of 1869, and thus enable Canadian boats to enjoy the same privileges in American waters that American boats enjoy in Canadian waters.

"Resolved, That it would be desirable for an International Commission of Engineers to determine the outflow of the several Great Lakes and the practicability of employing dams or other works at the outlets of such lakes for the purpose of raising and controlling their levels, and thus deepening the waters at slight expense in the several harbors thereof, as well as the waters over the dangerous shallows at the mouth of Detroit River and at the foot of Lake Erie."

FRANK A. FLOWER,
Secretary.

September 19th, 1894.

After some discussion the report was unanimously adopted by the Convention.

The Convention then adjourned till evening.

WEDNESDAY, SEPTEMBER 19TH—EVENING SESSION.

Mr. Flower read the

REPORT OF THE COMMITTEE ON PERMANENT ORGANIZATION.

Gentlemen of the Convention: Your Committee, to whom was referred the matter of Permanent Organization of this Convention, beg leave to report as follows:

NAME.

International Deep Waterways Association.

OFFICERS.

International President—Oliver A. Howland, M.P.P., Toronto.
International Vice-President (U.S.)—L. E. Cooley, C.E., Chicago.
International Vice-President (Canada)—James Fisher, M.P.P., Winnipeg.

STATE AND PROVINCIAL PRESIDENTS.

Colorado—Senator E. O. Wolcott, Denver.
Iowa—A. P. McGuirk, Davenport.
Illinois—Captain J. S. Dunham, Chicago.
Indiana—T. W. Venneman, Evansville.
Michigan—H. W. Seymour, Sault Ste. Marie.
Montana—Senator Thomas C. Power, Helena.
Minnesota—W. C. Sherwood, Duluth.
Massachusetts—Edwin H. Abbot, Boston.
Nebraska—E. Rosewater, Omaha.
New York—F. S. Witherbee, Port Henry.
North Dakota—Geo. B. Clifford, Grand Forks.
Ohio—Luther Allen, Cleveland.
Pennsylvania—James H. Henderson, Pittsburgh.
South Dakota—Senator R. T. Pettigrew, Sioux Falls.
Wisconsin—Frank A. Flower, Superior.
Wyoming—Senator Joseph M. Corey, Cheyenne.
Assiniboia— —— Davidson, M.P.P., Indian Head.
Manitoba—T. W. Taylor, Winnipeg.
New Brunswick— —— Robertson, St. John.

Ontario—J. Brown, Toronto.

Quebec—R. R. Dobell, Quebec.

Saskatchewan—Captain D. H. McDowell, Prince Albert.

EXECUTIVE BOARD.

Exofficio—Oliver A. Howland, Toronto; L. E. Cooley, Chicago; James Fisher, Winnipeg.

Elected—Frank A. Flower, Superior, Wis.; A. L. Crocker, Minneapolis, Minn.; James Campbell, Montreal; Edwin H. Abbot, Boston; J. S. Dunham, Chicago; James Conmee, Port Arthur; James Suydam, St. Paul; H. W. Seymour, Sault Ste. Marie; R. R. Dobell, Quebec; A. Gifford, Meaford; L. R. Keck, Cincinnati.—11.

Recommended,—That in case the Convention shall adopt this report, the Executive Board herein provided be and is hereby charged with the duty of drafting a Constitution and By-laws, formulating an Address or Memorial to the people of both Canada and the United States, and providing generally to carry into effect the objects of the permanent Association, with full power to act finally in all such matters.

Respectfully submitted,

FRANK A. FLOWER,
Secretary.

September 19th, 1894.

Mr. McGuirk—I move the adoption of the report as read.

Mr. Brown—I have much pleasure in seconding the motion.

Mr. D. Blain—The object of this Convention as outlined by the Citizens' Committee held in the hall was to endeavor to ascertain what would be the quickest, safest and cheapest way to carry freights from the head of the Lakes to tidewater. I intend to move that the report be amended before it is adopted. I intend to move that the basis of this Association be widened.

Mr. Smalley—The only amendment to the report would be as to the name of the organization or of the names on the committee.

Mr. McGuirk—I rise to a point of order. I insist upon the ruling of the chair.

Mr. Smalley—Mr. Blain is not speaking to the question of the appointment of the Committee of this organization.

Mr. Thompson—This Convention was summoned for discussing the deepening of existing waterways. Other projects have been discussed as a matter of courtesy, but it is not necessary we should endorse them. I don't think it advisable now to take up the time of the meeting with any further discussion on this point.

The report of the Committee was adopted by a unanimous vote.

The President and Vice-President elect were then called upon.

Mr. Howland—Mr. Chairman and Gentlemen, I have to express my deep sense of the honor that has been conferred on me, not I believe as personal considerations, but because it was felt that Toronto and Canada were entitled to some special recognition in connection with the work which this Convention is the inception. The nomination of myself to this high office was an entire surprise to me. I feel it is a weight of responsibility that I am assuming rather than anything which would create exultation. I shall do the utmost in my power to forward the interests of the undertaking, relying upon the assistance of the far more experienced gentlemen both from my own country and from the country which has so generously come forward to throw in its influence in this matter. I may be permitted to congratulate the Convention on the successful result of its labors. I think it was not expected by any of us in Toronto that we should proceed with such practical harmony and with such hopeful steps towards the consummation of the object we have in view. I think, sir, we may see the future already opening. Nature provided these great waterways as the outlet to the Great Lakes.

The practical results we look forward to are of a kind that must engage the interests of the great masses of the people of both countries. One matter gives me special pleasure in connection with this Convention, and that is, the enthusiastic manner in which it has taken up the resolution on the subject of an International Court, as a means of preparing the minds of the people of both countries to receive our projects and to carry them out in a liberal and broad spirit. On other occasions I shall no doubt be privileged to present further reasons why such an institution as an International Court should be formed. I can only say at present that I look forward to the success of that movement, not immediately, but in a reasonable time, and its effect will be to constitute a federation of the English race. It will be a step towards the poet's dream of the federation of mankind. It is a practical step towards that Parliament of Man of which our great and now lamented poet has sung. Such conventions as these are in themselves a kind of Parliament of Man. Similar conventions are being held for various purposes, religious, moral, scientific. They may, at all events, be called Committees of the Parliament of Man, and we know that the best work of parliaments is that done in committee. This International Court will be a means of preventing the possibility of International quarrels and differences between different branches of the race culminating in violence. The United States Supreme Court was formed as a court to decide questions between the different States of the Republic. There is nothing to prevent the extension of that principle to all branches of the English race. I have never had any faith in those dreams which look to political amalgamation. The tendency is rather towards local individuality and independence. There is, in my opinion, only one practicable and substantial bond of union, and that is, judicial confederation. In conclusion, I wish to express once more my thanks for the honor you have conferred on me, and my earnest and enthusiastic hopes for the ultimate success of this great movement. (Applause.)

Mr. Cooley—It would be affectation on my part not to express the feeling which I have of the honor which has been conferred on me. I had great doubt in

my mind as to whether I should accept the position. I thought perhaps it would be wiser to do honor to a larger constituency to which we must look for support, but after reflection I considered one of the greatest forces of this whole movement that is now organized in a way, is the City of Chicago; and in accepting this honor I have accepted it for the city which has sent me here as their representative. I have had some experience in promoting agitations. I know this project you have so much at heart will pass through many vicissitudes. If this Executive Committee will prepare the proper matter and the proper arguments and will enlist on both sides of the line a dozen apostles, who will walk up and down the land with the faith that is in them, you can carry this project through. (Applause.) I think we have accomplished a harder task at Chicago, not enlisting two nations with unlimited capital, but a single city, which is spending its substance on its canal and dedicating it for the use of the whole people. As surely as we act wisely and enlist the support at our command I expect to live long enough to go to the Gulf of Mexico in a boat drawing 14 feet and to the Atlantic in one drawing 26 feet. The whole idea of this Convention is to me a part of a general idea which has been my guiding star for 15 years. In fact 15 years of my lifetime has been devoted to the subject of waterways. The need is so apparent from an engineer's standpoint that I prefer to think there is no resistance which may not be overcome. As I look at this question, the first proposition is, is it feasible? It is feasible from an engineering standpoint. The next question is, is it economical to construct it? There is no question about it. The project is justifiable considering the resources of the countries. There is no doubt this project in its entirety is more justifiable than either the Suez or the Nicaragua Canal. If you are satisfied of these two propositions, nothing else remains. There will be no opposition except prejudice and ignorance and that no wise man need fear.

Mr. Smalley—I move we now proceed to the question of the holding of the next Convention.

Mr. Conmee - I move that the next Convention be held in Duluth.

Mr. Cooley—Wouldn't it be better to let the Executive Committee determine this question? Let them work at it and call the Convention at their discretion. I will make a motion to that effect.

Mr. Brown—It is usual on these occasions for the city or town that would like to have the Convention to invite it. I think if the matter was left for five minutes we would get half-a-dozen invitations.

Mr. Cooley—In about two years our 26-foot channel at Chicago will be opened. We might be able to offer some inducements for the holding of a convention in Chicago at that time.

Mr. Smalley—I think the matter of the next convention, the time and place of it, is a very important matter. I don't think we can allow this movement to sleep for two years, as Mr. Cooley suggests, and I don't think we ought to go very far away from the great centres of population. I was disposed at first to recommend Minneapolis, but I am more disposed to think we ought to have the next convention at some convenient point between the East and West. I think if the

City of Toledo or Cleveland should invite us, either would be a very good place. I think this matter ought to be left with the Executive Committee. I second Mr. Cooley's motion.

Mr. Flower—I would like to invite the members of this Association to come to Superior next September. I don't think that is any too early. When we first organized in Superior there was only a dozen people in favor of the deep waterway movement. The next Convention was held at the Soo, and they have been held at Grand Forks, St. Paul and Detroit. I would like to invite you to Superior. Up there is where the wind blows a thousand miles. It is what Brother Cooley calls the bread-basket of the North American Continent. It is the end of the greatest inland waterways of the world. It is the place where is concentrated as a temporary market more of the bread and food that supports human life than at any other point. Superior is easily accessible to the Canadians. The trip will do them good. We are all in favor of 21 and 26 feet, or of 46 feet, if that is the size any one will build vessels. We will give you a royal, good welcome and a good time, and to all delegates who come properly accredited there shall be no expense after they get there except, perhaps, if they want to drink whiskey. (Laughter.) All ordinary hotel bills will be paid, and we will treat you well. The people of Winnipeg think the people down here don't care much about Manitoba, and they are thinking of exporting their produce by way of Hudson's Bay. If you come up in that direction you will secure a large number of delegates from the north-western part of the Dominion, and so help the cause generally. If Brother Cooley doesn't mind, I would like him to withdraw his motion. We have six fine hotels in Superior, two larger than any I have seen in Toronto. Your bills will cost you nothing. (Applause.)

Mr. Wheeler—I take very much pleasure on behalf of the people of Cleveland and of the Chamber of Commerce in inviting the Convention to that city next year. In 1892 eleven million tons of freight were handled there. The figures up to the 1st of September show that we are 500,000 tons ahead of the freight locked through the Soo. We would like you to come down to that district to see what we are doing. We want you to see a shipyard that is unexcelled on this Continent. Come to the city that has the largest tonnage of any city on the lakes, that makes the most ships of any city in the United States. We are within 18 hours of St. Paul, but a short distance from our Canadian friends, and in close communication with the South, whose help we must have. We hope you will come to Cleveland and we will make your visit as agreeable as we can.

Mr. Smalley—I feel very much like accepting the invitation of Cleveland. We are all loyal up in the North-West and there is not so much need of a Convention there. If we can get the great city of Ohio to take up this movement we will secure an immense force right in the centre where we need it.

Mr. Brown—I have much pleasure in seconding Mr. Flower's motion to hold the next Convention in Superior.

Mr. McGuirk—I think Cleveland would be an excellent place to go to. We want the support of Ohio, Pennsylvania, Michigan. You must have the support of the Southern and Middle States as well as those bordering on the Lakes. You

must have the Atlantic States as well, and it seems to me no more convenient point can be selected than Cleveland.

Mr. McIntyre—A year is a long time to wait for a Convention. I think a Convention should be held in June or July. If we are determined to get a 21-foot channel the sooner we get to work the better.

Mr. Boyle—It seems to me that what we want behind this movement is influence. There is no city on the Lakes that has larger influence than the City of Chicago. I would move the next Convention be held in Chicago not later than the first of July.

Mr. W. I. Mackenzie seconded this motion.

Mr. Cooley—In prosecuting this movement a great deal of work will have to be done by individuals selected for the purpose. That is the province of the Executive Committee. I believe the greatest work of legislation has been done by individuals. Public sentiment has to be created. That can be created in a measure by Conventions, but if you attempt to hold Conventions every six months they will soon peter out, and this subject has to be kept up for a series of years. The Mississippi Valley movement was started in 1874. They held meetings every two years. In the mean while they had an active organization in every city of of the Mississippi Valley and a General Committee to bring together all the results of that organization and distribute literature in all directions. I believe our Executive Committee is the proper organization to attend to the holding of the Convention. For some reason it might be advisable to hold it at Ottawa or Washington and the Committee should be free to take advantage of conditions which may arise favorable to the project. I think therefore the original motion should prevail.

Mr. Smalley—I think it would be in order to refer all these invitations to the Executive Committee. I will move that the invitations already made be referred to the Executive.

Mr. Suydam—I second the motion.

Carried unanimously.

Mr. McGuirk—I move we tender the thanks of this Convention to His Worship the Mayor and the citizens of Toronto for the hospitality they have accorded to us.

Mr. Smalley—I second the motion.

Carried.

Mr. Howland—I think the thanks of this Convention are due the President and two Vice-Presidents, the Secretaries, and the Chairman and Secretary of Committees who have brought the labor of the Convention to such a successful issue. I make a motion to this effect.

Seconded by Mr. Conmee and carried.

Mr. Thompson—On behalf of myself and associates I thank you very kindly for the passing of this resolution. I my say on my part the work has been a

matter of love. I don't expect this will be my last connection with the deep waterways movement. I am not on the Committee, but that is not a slight to me. I have been offered a position on it, but I declined, knowing that others are able to fill it better than myself. I hope to attend other Conventions and to lend what assistance I can to further the objects for which we have been called together.

Mr. Smalley—I thank the Convention for the resolution just passed. I would just like to say that we have had here a remarkably good working body of men.

Mr. Suydam thanked the Convention for the resolution.

Mr. McGuirk—I accept your hearty thanks and I desire to say I am not a complete stranger in Canada, because it is the land of my birth. I know your ways and the thorough business training and hospitality of the people of Canada and I came with great pleasure to the Queen City of Toronto to accept your hospitality. I trust that the good work born here will spread to other parts of this Dominion which ought to have a population of twenty-five million people. I thank the Canadian members for their kindness and generosity and the breadth of thought they have manifested throughout the entire Convention. When the next Convention is held I hope we will have delegates representing from the mouth of the St. Lawrence Gulf to the great North-West.

The Convention then adjourned.

THURSDAY, SEPTEMBER 20TH.

On Thursday morning the delegates were driven around the City and entertained at luncheon at the Rossin House.